Attachment 7

Correspondence with USEPA

Trestler, Lauren

From: Goloubow, Ron
Sent: Friday, October 16, 2009 11:40 AM
To: Santos.Carmen@epamail.epa.gov; Wilson.Patrick@epamail.epa.gov
Cc: Gibbs, Alan; Seyfried, Scott; Jones, Michael
Subject: FW: 66th Avenue, Oakland, CA - TSCA issues

Carmen - Thanks so much for reviewing the data for the subject Site. LFR would like to arrange for a conference call with you to discuss our approach to the project in response to the email you sent on October 13, 2009 (below). We are proposing that the conference call take place on either Wednesday, October 22, at 1200 Pacific Standard Time (PST) or Thursday, October 23 at 0900 PST.

The subject of the conference call will be to present and discuss LFR's conceptual approach to this project and will focus on the following specific issues:

- The scope of work to be presented in the Self-Implementing On-Site Cleanup and Disposal work plan – (i.e. the scope of work to collect additional soil and/or concrete samples to assess PCBs in soil and concrete at the Site)
- Proposed building demolition and soil disposal plan

Please let me know which day and time works for you &-or Patrick Wilson.

Thanks Ron.

Ron Goloubow, P.G.
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510-596-9550 Direct Dial
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510-652-4906 Facsimile
ron.goloubow@lfr.com

From: Santos.Carmen@epamail.epa.gov [mailto:Santos.Carmen@epamail.epa.gov]
Sent: Tuesday, October 13, 2009 3:10 PM
To: Goloubow, Ron
Cc: Wilson.Patrick@epamail.epa.gov; Santos.Carmen@epamail.epa.gov
Subject: PCBs at Aspire Property (66th Avenue, Oakland, CA)
Importance: High

Dear Ron Goloubow:

Thank you for making contact with USEPA Region 9 (USEPA) to determine if the Toxic Substances Control Act (TSCA) regulations for polychlorinated biphenyls (PCBs) in 40 CFR Part 761 (the "PCB Regulations") apply to the Aspire property (site) on 66th Avenue (between East 14th Street and San Leandro Street) in Oakland. You work with LFR who is Aspire's consultant. Aspire plans to build a school (middle / high school combined) at its property. PCBs are present in soils at the site among other contaminants.

We believe that TSCA requirements apply to the cleanup of PCBs at the site based on the information we have reviewed in the LFR /Arcadis July 9, 2009 revised Corrective Action Plan (CAP). Section 4.1.1 of the CAP states that "[d]ocumented releases of hazardous materials at the Site include petroleum hydrocarbon compounds (from the former UST) and PCBs (presumably from their manufacture and service of transformers and other electrical equipment components)." We clarify that although soil sampling / analysis data presented in the CAP show PCBs mostly at concentrations below 50 mg/kg

(ppm) and one hot spot at 69.68 ppm PCBs, releases from at least Pacific Electric Motors (PEM) resulted in the PCB contamination at the site. Soils with PCB concentrations up to 45,470 ppm were excavated by PEM under the oversight of Alameda County Department of Environmental Health (ACDEH). Based on the CAP, Pacific Electric Motors operations involved manufacturing and servicing of transformers and other electrical equipment components. TSCA requirements apply at the site. Therefore, this message provides guidance on PCB cleanup options available under TSCA and some recommendations.

Based on the CAP (LFR / Arcadis) and as a prelude to the recommendations that we are making later in this message, we include below a brief summary of site operations and ownership.

- Pacific Electric Motors (PEM) occupied the site from 1949 to 2001.
- PEM constructed the two buildings that currently occupy the site: the Manufacturing / Office Building and the Warehouse.
- At the site, PEM was involved with manufacturing of specialty magnets, power supplies, and components; and repairing of transformers, motors, generators and magnets.
- In about 1975, PEM installed at the site a 2, 000-gallon gasoline underground storage tank.
- PEM may have stored vehicle lubricants and oil for vehicle maintenance.
- Among others, waste water discharges in the past included air compressor condensate.
- Highest documented concentration of PCBs in soils at the former PEM site is 45,470 mg/kg.
- Mo Dad Properties acquired the site in 2001; and the on-site buildings were occupied by Bay Area Powder Coatings.
  Bay Area Coatings declared bankruptcy.
- Landeros Iron Works subleased the property from Bay Area Coatings and vacated the site in 2008.
- The site is currently vacant and the original structures still remain.

In addition to the above, we understand that in 1992 and 1993, PEM conducted soil investigations as required by ACDEH. Approximately, 400 cubic yards of soil that contained up to 45,470 mg/kg PCBs as Aroclor 1260 were excavated and disposed offsite. ACDEH had required PEM to meet a 1 mg/kg PCB level in soils as the excavation remedial goal. ACDEH issued a "No Further Action" letter to PEM after completion of the soil removal activities.

Current PCB Contamination

Based on the data presented in the CAP, PCB-contaminated soils are still present at the site: samples taken of the Northern Area have PCBs below 50 ppm (ranging from not detected to 21.34 ppm PCBs) and samples taken in the Southern Area show PCBs above 50 ppm (samples range from not detected to one sample at 69.68 ppm PCBs). The CAP does not provide the basis for the areas at the site that were investigated for PCBs and LFR believes the investigated areas were targeted based on the operations conducted at the site.

Lacking additional information on the site, it is uncertain if previous soil investigations for PCBs identified all potential PCB source areas (based on PEM and others that occupied the site) and if such investigations involved the entire 2.5-acre site. For example, it is uncertain if historic and most recent soil investigations included a PCB assessment in the area of the steam-cleaning sump where the water was found to contain traces of PCBs (CAP, Section 2.1.2). If the sump is still present at the site, is it made of concrete and if it is, have bulk concrete samples been collected from the concrete, and soil samples collected beneath and in proximity to the sump?

Discharges of "air compressor condensate" occurred at the site and these discharges may have contained PCBs depending on the age and type of compressor used and the oil contained in the compressor. Releases of oil from transformers and other electrical equipment potentially containing PCBs also occurred at the site. In addition, several types of oils were stored at the site some of which were used for vehicle maintenance. A possibility exists that some of these oils may have been hydraulic fluids (PCBs were also added to hydraulic oils in the past) or other oils (potentially containing PCBs) used to service other equipment on site like air compressors. Aroclor 1260, which is associated with transformer oils, hydraulic fluids, and other applications, was detected in soils at the site.

Section 8.1.1 (Site Management) of the "Implementation Plan" (Section 8.0) of the CAP states that building materials will be removed from the site and reference is made to materials such as lead-based paint and asbestos containing material (such as transite [asbestos concrete] pipes. We understand that building structures existing at the site are made of metal (on concrete slab) and will be demolished before construction of the school. We also understand that PEM constructed these buildings in the late 1940s.

Alternatives for PCB Cleanup

Based on the limited information that we have reviewed, cleanup of the site and demolition activities will involve the need to properly dispose of PCB remediation wastes (including bulk PCB remediation waste such as soils) and PCB bulk product wastes. The terms PCB remediation waste and PCB bulk product waste are defined in the PCB Regulations at 40 C.F.R. 761.3.

Section 761.61 maps out the requirements of the PCB Regulations for cleanup and disposal of PCB remediation wastes while section 761.62 sets out the requirements for disposal of PCB bulk product waste. Self-implementing procedures for cleanup and disposal of PCB remediation wastes can be found at 40 CFR 761.61(a) and the procedure for a risk-based disposal approval is found at 40 CFR 761.61(c). The http://www.access.gpo.gov/nara/cfr/waisidx_08/40cfr761_08.html link will take you to the PCB regulations in the electronic Code of Federal Regulations after you paste it in your web browser. PCB remediation waste and PCB bulk product waste are defined in 40 CFR 761.3.

Adequate characterization of the site is required for the self-implementing procedure. See 40 C.F.R. 761.61(a)(2). The self-implementing procedures set out in section 761.61(a) may **not** be used to clean up surface or ground waters; sediments in marine and freshwater ecosystems; sewers or sewage treatment systems; any private or public drinking water sources or distribution systems; grazing lands; or vegetable gardens. See 40 CFR 761.61(a)(1).

Therefore, the site characterization in the notification submitted to USEPA should clearly explain what has been contaminated by PCBs and all reasonably foreseeable uses of the property given its proposed use as a school. For example, many schools in California have installed vegetable gardens as part of their educational curriculums and therefore the potential for asphalt or concrete being removed for a vegetable garden at some time in the future should be evaluated. The change in the use of the Aspire site is relevant to the required cleanup level and the procedures which apply. USEPA has the authority to require cleanup of a site, or portions of it, to more stringent cleanup levels than are otherwise required by the self-implementing procedures, based on the proximity to areas such as schools. See 40 CFR 761.61(a)(4)(vi).

The risk based option authorized by section 761.61(c) of the PCB Regulations requires a risk evaluation for on-site cleanup and disposal of PCB remediation waste in addition to the notification and certification requirements specified in subsection 761.61(a)(3). The risk based disposal option is used by parties when they want to cleanup a site, collect samples, or dispose of PCB remediation waste in a manner different than prescribed in section 761.61(a) or when the self-implementing procedures are not applicable.

Under both PCB cleanup options, a Notification and Certification must be submitted to USEPA in accordance with subsection 761.61(a)(3) of the PCB Regulations and this notification involves characterizing the site adequately. The certification required in subsection 761.61(a)(3) should include all of the information specified by that provision and a certification meeting all the requirements of sections 761.3 (defining certification) and 761.61(a)(3)(i)(E) of the PCB Regulations. For cleanups where the self-implementing procedure is allowable and the option being pursued, USEPA will respond in writing (approving of the self-implementing cleanup, disapproving of the self-implementing cleanup, or requiring additional information) within 30 calendar days. USEPA has no mandated time frame to approve a risk-based application for a PCB cleanup. Cleanup and verification of a cleanup conducted under the PCB self-implementing cleanup option must be conducted in accordance with all the applicable requirements in 761.61(a), including 761.61(a)(6).

PCB contaminated soils at the site that will be disposed offsite are PCB bulk remediation waste. Disposal of these soils should be based on as found (in situ) PCB concentrations, not on the concentration of the soil after it has been excavated and placed in a pile.

Other PCB remediation wastes expected to be generated as part of the cleanup include concrete surfaces at the site contaminated with PCBs, personal protective equipment, cleanup wastes, and liquids. Disposal requirements for these wastes are in 40 CFR 761.61(a)(5). In addition, decontamination of sampling and equipment and disposal of decontamination residues should be conducted in accordance with 40 CFR 761.79 (c), (d), (e), (f), and (g).

The CAP contains a good portion of the information required in the Notification and Certification which must be submitted to USEPA for either the self-implementing or risk based PCB cleanup options, but USEPA needs more detailed information. See below.

The extent of PCB contamination has to be clearly discussed as well as any information concerning PCB sources at the site. The extent of contamination is not clear to USEPA so the site investigation uncertainties mentioned earlier in this message should be addressed in the cleanup plan. The cleanup plan should present PCB analysis data as total PCBs and speciated Aroclors (e.g., Aroclor 1242, Aroclor 1260).

Recommendations

We recommend the following:

- The characterization of the Aspire site still contains data gaps and uncertainties. Some of these uncertainties were described earlier in this message. As required by 40 CFR 761.61(a)(2), characterize the Aspire site in more detail to provide USEPA with adequate information concerning the nature of the contamination, including: (a) kinds of materials contaminated; (b) a summary of the procedures used to sample contaminated and adjacent areas and a table or cleanup site map showing PCB concentrations measured in all pre-cleanup characterization samples. The summary must include sample collection and analysis dates. USEPA will require more detailed information including additional characterization sampling - see below. (c) The location and extent of the identified contaminated area, including topographic maps with sample collection sites cross referenced to the sample identification numbers in the data summary. (d) A cleanup plan for the site, including schedule, disposal technology, and approach. This plan should contain options and contingencies to be used if unanticipated higher concentrations or wider distributions of PCB remediation waste are found or other obstacles force changes in the cleanup approach.
- Utilize Subpart N of the PCB Regulations, which sets out a method for collecting new site characterization data, for assessing the sufficiency of existing site characterization data.
- Utilize Subpart O to verify that cleanup levels have been met after characterization and cleanup have been conducted.
- Utilizing appropriate procedures as specified in the PCB Regulations, collect additional soil data at the Aspire site to determine if PCBs are present in other areas (e.g., steam cleaning sump) of the site. Additional soil samples should be collected in areas where PCBs may be a co-contaminant and in areas where PCB samples were not collected and TPH is or may be present and enhancing the solubility of PCBs in soils.
- Provide adequate information to characterize whether the PCBs at the Aspire site have migrated to groundwater (such as ground water samples).
- The July 9, 2009 revised CAP includes the ACDEH PCB cleanup level of 0.39 ppm for soils. The self implementing PCB cleanup regulations in 40 CFR 761.61(a)(4) requires a PCB cleanup level for high occupancy areas equal to or below 1 ppm without further restrictions, but USEPA has the authority to impose more stringent requirements if needed due to considerations such as proximity to a school. In some circumstances a cleanup goal lower than the level set by ACDEH might be appropriate. EPA has not yet made a determination regarding the appropriate cleanup level in this instance. If made available to USEPA, we will review the calculations and basis used in developing the 0.39 ppm PCB cleanup goal in the CAP. Whatever cleanup goal is ultimately adopted as the cleanup level for the TSCA cleanup, the owner of the property would be required to meet the cleanup level adopted for the TSCA cleanup.
- PCB bulk product waste: We believe that PCB bulk product waste will be generated during demolition of the structures at the site. Although a specific approval from USEPA is not necessary for removal and disposal of PCB bulk product waste, we recommend that the LFR / Arcadis PCB cleanup plan also include a section on removal and disposal of PCB bulk product waste. Given the age of the structures, we recommend a survey be done on these structure to determine PCB products that may be involved. For example the metal walls of the buildings may be made of metal siding that may be coated with a PCB coating like Galbestos. If manufactured with this coating the metal walls of the building would be a PCB bulk product waste.

I hope the above information is useful in preparing a PCB cleanup plan that meets TSCA requirements. Please call me if you have any questions concerning this message.

Sincerely,

Carmen D. Santos
Project Manager
RCRA Corrective Action Office
Waste Management Division
USEPA Region 9
Voice: 415.972.3360
Facsimile: 415.947.3553

Trestler, Lauren

From: Goloubow, Ron
Sent: Tuesday, October 20, 2009 7:26 PM
To: Santos.Carmen@epamail.epa.gov; Wilson.Patrick@epamail.epa.gov
Cc: Charles Robitaille; Gibbs, Alan; Seyfried, Scott; Jones, Michael; Goloubow, Ron
Subject: 1009 66th Ave. Oakland, CA - soil sample rationale
Attachments: 1009-66th Ave, Oakland, CA - PCB Sample Location Rational 10-19-2009.pdf; Figure 1-09155.00_F1.pdf; PCBs in soil rev 1.pdf

Carmen - The attached provides the rationale for the proposed soil and concrete sample locations to be collected for polychlorinated biphenyls (PCBs) analysis at the subject Site. I will follow up with you Wednesday October 21, 2009 in the early afternoon to find out what progress the EPA has made regarding the review of the "conceptual" sampling plan for this project. If you have any questions regarding this letter or the project in general, please do not hesitate to contact me at 510-596-9550.

Thanks Ron.

Ron Goloubow, P.G.
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Trestler, Lauren

From: Goloubow, Ron
Sent: Friday, October 23, 2009 7:01 PM
To: Santos.Carmen@epamail.epa.gov; Wilson.Patrick@epamail.epa.gov
Cc: Gibbs, Alan; Seyfried, Scott; Goloubow, Ron; Jones, Michael; Charles Robitaille
Subject: 1009 66th Ave. Oakland, CA Self-Implementing Cleanup Plan
Attachments: 1009 66th Ave-Oakland, CA-TSCA Letter -SICP 10-2309.pdf; Fig 1 Proposed Charter School Site Location.pdf; Figure 2 SICP.pdf

In preparation of our meeting on Tuesday afternoon please find the Self-Implementing Cleanup Plan for the subject Site. As we discussed, LFR anticipates initiating this cleanup on a "fast track" schedule to meet the client's loan and construction milestones, which are less than 30 days after submittal of this notification.

We here at LFR and Aspire Charter Schools appreciate your time assisting us with our accelerated schedule and look forward to meeting with you on Tuesday. If you have any questions or need any more information prior to our meeting please do not hesitate to contact me.

Ron.

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Trestler, Lauren

From: Goloubow, Ron
Sent: Friday, November 06, 2009 1:30 PM
To: Santos.Carmen@epamail.epa.gov
Cc: Gibbs, Alan; Goloubow, Ron
Subject: 1009 66th Ave. Oakland, CA - soil, concrete, & bldg material sampling
Attachments: bldg mat maps_001.pdf; concrete & soil samples_001.pdf; Test America Building Materials Sample results.pdf; Test America Soil - Concrete Sample results-10-2009.pdf

Carmen the following items are attached:

Two maps (Figures 3 and 5) illustrate the locations of the five samples of building materials that were collected from building 1 (the large warehouse) on 10-29-2009. I have also written in the analytical results of the PCB analyses on these maps.

One map (Figure 2) that illustrates the locations of the 12 soil samples collected approximately 0.5 to 1.5 feet bgs from soil borings SB-1 through SB-12 that are located across the property. As we discussed, each of these soil samples did not contain PCB above laboratory reporting limits.

Also illustrated on this map (Figure 2) are the locations of concrete samples collected from inside the building 1 (the large warehouse; SB-5, SB-6, SB-8, and SB-10). Concrete sample SB-9 was collected from an oily stained area on the concrete pad for the air compressor.

I have also attached the laboratory reports for these samples.

The surveyor is on site locating the samples so that the exact soil and concrete sample locations may be revised.

I will contract you later today around 1:00 pm for an update on this project. If you have any questions in the interim please do not hesitate to contact Alan or me.

Thanks Ron.

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LFR an ARCADIS company

November 18, 2009

003-09155-08
transmitted via email only

Ms. Carmen Santos
U.S. Environmental Protection Agency, Region 9
Mail Code WST-5
75 Hawthorne Street
San Francisco, CA 94105

Subject: Conditional Approval of the Toxic Substance Control Act Self-Implementing Cleanup Notification and Certification, Former Pacific Electric Motors Facility, 1009 66th Avenue in Oakland, California

Dear Ms. Santos:

The property owner, Aspire Public Schools (Aspire) and LFR Inc., an Arcadis Company (LFR) would like to thank the staff of the U.S. Environmental Protection Agency (USEPA) for the letter providing the conditional approval of the Self-Implementing Cleanup Plan (SICP; dated October 23, 2009) with conditions at the former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California (the "Site" [Figure 1] letter dated, November 13, 2009; the "EPA Letter"). The excavation of the polychlorinated biphenyl (PCB) affected soil began at the Site in accordance with the SICP and the EPA Letter on November 4, 2009 (Figure 2).

Aspire and LFR's intention to comply with the parameters of the conditional approval are provided as follows:

1. Certification Signed by LFR & Aspire

A revised certification for this project signed by representatives of both Aspire and LFR is attached.

2. Pre-Demolition and Post-Demolition PCB survey

The pre-demolition and post-demolition sampling plan for building materials is provided as an attachment to this letter.

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3. Sampling & Analysis Plan

As acknowledged in the EPA Letter, LFR transmitted a Sampling and Analysis Plan for the Site (the "SAP") on November 5, 2009. This SAP focused on the objectives, methods, procedures associated with the soil samples to be collected and analyzed in conjunction with pre-demolition soil characterization and post-remediation soil sampling. As requested, the pre-demolition and post-demolition sampling plan for building materials is provided as an attachment ot this letter.

4. Sequence of Pre-Cleanup PCB Soil Characterization; Pre-Demolition Sampling; Soil Remediation; Soil Clean-Up Verification

Aspire and LFR will complete the project under the following sequence of work:

- Pre-Cleanup PCB Soil Characterization – The scope of this work was completed in accordance with the SAIC and the SAP
- Pre-Demolition Sampling - this sampling was completed in accordance with the building materials SAP provided above (in this letter).
- Soil Remediation - Site remedial actions are taking place at the Site in accordance with the Revised Corrective Action Plan, the SAIC, and the SAP
- Soil Clean-Up Verification and Post-Demolition Sampling - Soil clean up verification and post-demolition sampling will be conducted in accordance with the procedures provided in the CAP, SAP, and SAIC. As provided in the SAIC, post-demolition soil sampling regarding the removal of the sewer pipelines at the Site will take place by collecting soil samples adjacent to the sanitary and storm sewer pipelines that are to be abandoned as part of the redevelopment of the Site. If material (liquid or solid) is present in the sewer pipes, samples will be collected for PCB analysis (EPA test method 8082) so that the material may be disposed of in accordance with the procedures provided in the EPA letter (see item 5 below).
- Following the demolition of the large warehouse building, soil samples will be collected from the ground surface (surface soil samples) at areas of the Site that were unpaved during demolition activities. Soil samples will be collected on a 75-foot grid in the unpaved areas. Samples will be collected and analyzed using methods provided in the SAP.
- In addition to samples of material from in the sewer pipeline(s) and as provided in the SAIC, soil samples will be collected every approximately 50 feet of sewer line approximately 1 to 2 feet below the pipeline invert. The soil samples will be analyzed for PCBs in accordance with the SAP. If soil containing greater than 0.13 milligrams per kilogram (mg/kg) is detected in the soil samples, additional soil will be removed and the additional confirmation soil samples will be collected for analysis in accordance with the SAP.

5. PCB Remediation Waste

Aspire has the following EPA identification number for this property: CAC002647778. Aspire and LFR will dispose of the soil in accordance with the procedures provided in the EPA letter. As such (porous and non-porous) building materials will be disposed of in accordance with the following regulations:

§ *761.61 PCB Remediation Waste*

Bulk PCB remediation waste may be sent off-site for decontamination or disposal in accordance with this paragraph, provided the waste is either dewatered on-site or transported offsite in containers meeting the requirements of the DOT Hazardous Materials Regulations (HMR) at 49 CFR parts 171 through 180. (1) Removed water shall be disposed of according to paragraph (b)(1) of this section.

(2) Any person disposing off-site of dewatered bulk PCB remediation waste shall do so as follows:

(i) Unless sampled and analyzed for disposal according to the procedures set out in § 761.283, 761.286, and 761.292, the bulk PCB remediation waste shall be assumed to contain ≥ 50 ppm PCBs.

(ii) Bulk PCB remediation wastes with a PCB concentration of < 50 ppm shall be disposed of in accordance with paragraph (a)(5)(v)(A) of this section.

(iii) Bulk PCB remediation wastes with a PCB concentration ≥ 50 ppm shall be disposed of in a hazardous waste landfill permitted by EPA under section 3004 of RCRA, or by a State authorized under section 3006 of RCRA, or a PCB disposal facility approved under this part.

Analytical results of soil samples collected from soil boring 4B located in proposed excavation area PCB-EXC1, contained PCBs at a concentration of greater than 50 mg/kg (see Figure 2). Based on theses analytical results, soil excavated from this area will be transported off-site and disposed of at Waste Management's Kettleman Hills Landfill.

Analytical results of soil samples collected from soil borings located in proposed excavation areas PCB-EXC2, PCB-EXC3, and PCB-EXC4 of the Site contained PCBs at a concentration of less than 50 mg/kg (see Figure 2). Based on theses analytical results, this soil will be transported off-site and disposed of at Republic Services' Vasco Road Landfill located in Livermore, California.

§ *761.62 Disposal of PCB Bulk Product Waste*

(b) Disposal in solid waste landfills. (1) Any person may dispose of the following PCB bulk product waste in a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill.

Based on the analytical results of samples collected from the various building materials at the Site, the building materials from the Site generated from demolition activities will be transported off-site and disposed of at Republic Services' Vasco Road Landfill located in Livermore, California.

6. Measures to Prevent Exposure of the Neighboring Community to Air Borne Particulates

In accordance with the SICP, the following provides the details regarding the air monitoring plan for the proposed excavation and demolition activities that are proposed for the Site.

Air Monitoring and Dust Control Measures

Real-time aerosol monitoring devices (mini-RAM) will be used to monitor total dusts generated during site work. If dust in excess of background levels (greater than 0.25 milligram per cubic meter [mg/m^3] above background levels) is observed for a sustained period of time (greater than 5 minutes), appropriate dust suppression measures (e.g., spraying soil with water) will be undertaken.

A total dust action level of 0.25 mg/m^3 above background levels that is sustained for 15 minutes would be conservative for the various COPCs detected on the Site that would be likely to adhere to windblown dust and protective of the on-site workers and members of the surrounding community.

Field staff will obtain and document total dust readings from the mini-RAM throughout each work day when affected soil excavation activities are occurring on the Site. These readings will be obtained from air monitoring stations established along the Site's perimeters (a total of 5 stations; see Figure 2).

In addition to monitoring for total dust using at least four fixed air monitors, equipped with a mini-RAM, Personal Air Monitors (PAMs) used to collect air samples. The air samples will be collected on cassettes (media) that will be submitted to a laboratory for analysis of PCBs, arsenic, lead, and benzene. The air samples will be collected each work day when affected soil excavation activities and site demolition activities are occurring on the Site. Air monitoring stations will be at locations illustrated on Figure 2 (attached).

Air samples to be analyzed for PCBs will be collected on laboratory supplied filter tubes equipped with a solid sorbent material comprised of 13-mm glass fiber and Florisil. The samples media will be provided by and the samples will be an analyzed by EMSL Analytical, Inc. located in Westmont, New Jersey. Details regarding the collection and analytical methods for the air sample samples are provided in the attached documentation.

Public Notification

The public participation document mailed by the Alameda County Environmental Health has been laminated and is posted in two places along the fence that is adjacent to the public right-of way along 66th Avenue.

7. Revised Clean-up Level for PCBs in Soil

Aspire and LFR will remove soil containing PCBs at concentrations exceeding 0.13 mg/kg. If soil containing concentrations of PCBs greater than 0.13 mg/kg cannot be removed from the Site that area will be documented as described under item 9. Risk Management Plan and Deed Notice below.

8. Cap for Site

In accordance with the development plan for the Site, the entire property will be capped with either building structures, asphalt, or concrete. Prior to developing the Site, a minimum of 2 feet of imported fill will be placed and compacted as backfill in areas where affected soil has been previously removed from the Site. In addition, areas of the Site that will be redeveloped for vehicular traffic or structures, 8 to 12 inches of base rock will be imported to meet the geotechnical requirements of the redevelopment project.

9. Risk Management Plan and Deed Notice

A risk management plan will be prepared for the Site and a notice will be placed on the deed in accordance with item 9 of the EPA Letter.

10. Record Keeping and PCB Clean-Up Report

Documentation associated with the remediation of the PCB-affected soil and building materials will be retained and the PCB Clean-Up Report will be prepared in accordance with item 9 of the EPA Letter.

11. Restoration of the Site

The Site will be restored in accordance with the CAP, the SICP, and the EPA letter.

Following your review of this letter, please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

Alan D. Gibbs, P.G., C.HG.
Vice President/Principal Hydrogeologist

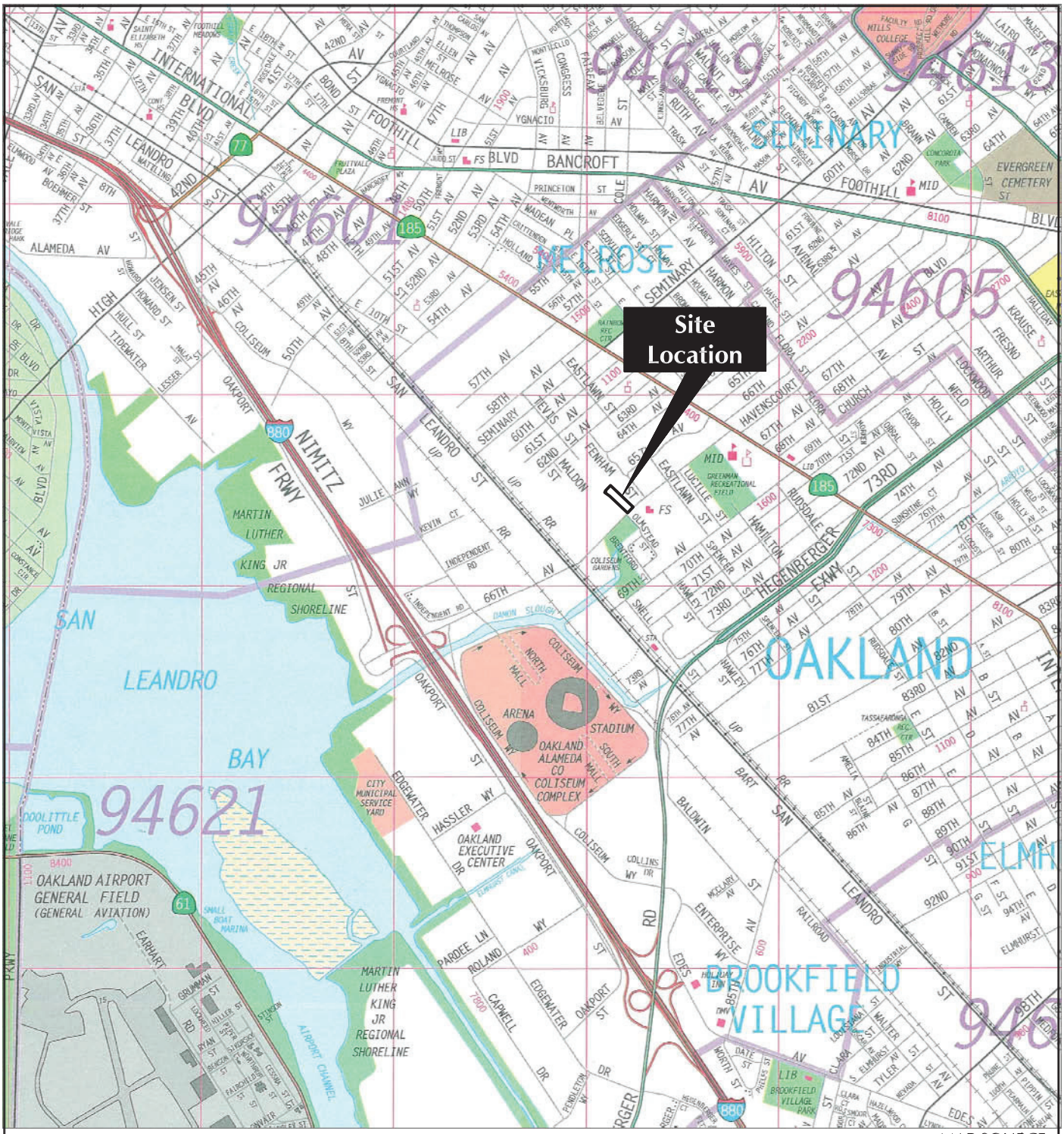
Ron Goloubow, P.G.
Senior Associate Geologist

Attachments

Figures 1 and 2
Certification
Sampling Plan for Building Materials
Air Monitoring; Sample Analysis Methods

cc: Mr. Mike Barr– Aspire Charter Schools
Charles Robitaille – Pacific Charter Schools
Paresh Khatri – Alameda County Department of Environmental Health

FIGURES



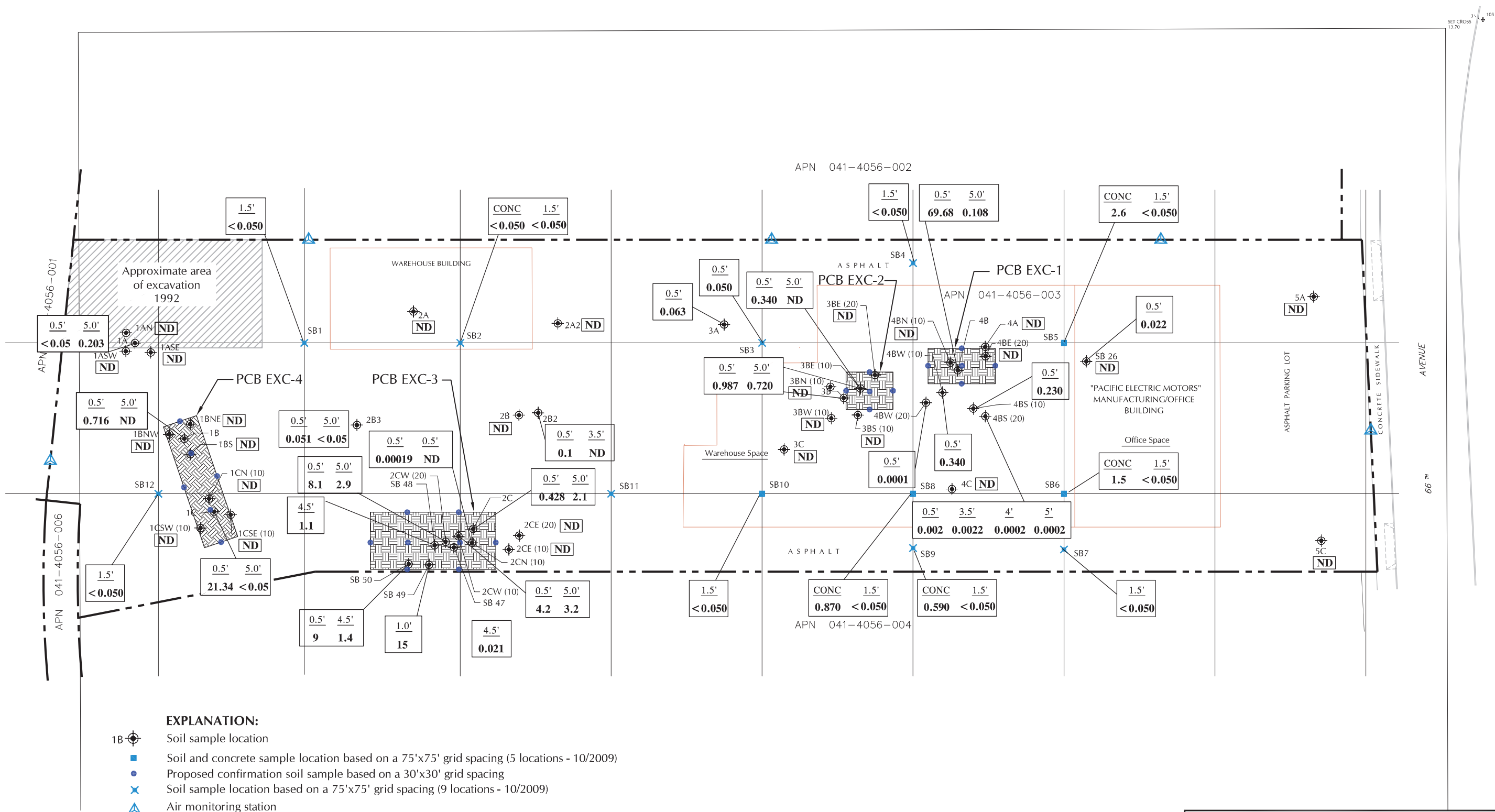
Site Vicinity Map

Proposed Charter School Site
1009 66th Avenue, Oakland, California

Figure 1

LFR an ARCADIS company

I:\Design\003\09155\00\000\dwg\Site Vicinity-2.dwg Oct 22,2009-10:28am



EXPLANATION:

- 1B — Soil sample location
- Soil and concrete sample location based on a 75'x75' grid spacing (5 locations - 10/2009)
- Proposed confirmation soil sample based on a 30'x30' grid spacing
- Soil sample location based on a 75'x75' grid spacing (9 locations - 10/2009)
- Air monitoring station
- Property line
- Proposed excavation of PCB-affected soil
- 4.5' / 1.1 — Depth in feet / Concentration in mg/kg

ND = Not detected at or above laboratory reporting limits

CONC = Concrete sample

0 50 Feet

PCBs Detected in Soil
0 to 5 Feet Below Ground Surface

Proposed Charter School Site
1009 66TH Avenue, Oakland, California

Figure 2

LFR an ARCADIS company

I:\Design\0030915\04\dwg\PCBs in soil rev1.dwg Nov 16,2009-4:49pm

TSCA CERTIFICATION

Certification Statement

Owner: Aspire Public Schools
Parties Conducting Cleanup: Arcadis and Innovative Construction Solutions
Project: Former Pacific Motors Facility – 1009 66th Avenue, Oakland, CA

In accordance with 761.61(a)(3)(i)(E); I, Michael Barr, hereby certify, that all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the presence, concentrations, and extent of polychlorinated biphenyl- (PCB) impacted media for Former Pacific Motors Facility – 1009 66th Avenue, Oakland, CA are on file and available for USEPA review at the following location:

LFR Inc. an Arcadis Company
Contact: Ron Goloubow

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

By: _____
Michael Barr - Aspire Public Schools

Date: 11/9/09

By: _____ for LFR
Ronald E. Goloubow - LFR Inc. An Arcadis company

BUILDING MATERIALS SAMPLING PLAN

Building Materials Sampling Plan
Former Pacific Electric Motors Facility
1009 66th Avenue in Oakland, California

On behalf of Aspire Public Schools (Aspire) LFR Inc. an Arcadis company (LFR) has prepared this Building Materials Sampling Plan (BMSP). The BMSP provides the methods used by LFR to assess the presence of polychlorinated biphenyls (PCBs) in the building materials in the two buildings at located at the former Pacific Electric Motors Facility located at 1009 66th Avenue in Oakland, California. The purpose of the BMSP was to provide data regarding the presence of PCBs in the building materials at the Site. The data collected will be used to assess disposal methods for the building materials following demolition of the two buildings currently located at the Site.

During the survey, LFR attempted to identify and collect samples of the building materials that may contain PCBs in preparation for the demolition of the buildings. The building materials survey was conducted to comply a request from us U.S. Environmental Protection Agency (U.S. EPA) to determine if the building materials in the buildings at located at the Site contain PCBs.

The survey encompassed visible and accessible interior areas of the two subject buildings. To assess the presence of PCBs in the building materials LFR collected representative samples of the following materials:

Window Caulk
Paint (or painted surfaces)
Concrete
Concrete Caulk
Roofing material

Sample Collection, Handling and Documentation

Sample procedures described in this section will be used for sample collection, shipping, analysis, and disposal. Each sample of the building materials will be collected using hand tools and the sample will be placed in a laboratory supplied glass jar. Sample containers will be 4 or 8 ounce laboratory supplied glass jars, and no preservative will be used. The sample container will be labeled with the sample identification, the time and date of collection, the analysis requested, and the initials of the sampler. The samples will be stored in an ice-chilled cooler and submitted to the laboratory under strict chain-of-custody protocols. The sample identification will reference the type of building material and location that the sample was collected (i.e. window caulking-building 1). The location of the sample and the sample identification will be recorded on a map at the time of collection. LFR shall coordinate with the laboratory for the delivery of collected soil samples under chain-of-custody protocols for chemical analysis.

Concrete Sample Collection Methods

In accordance with EPA Site Revitalization Guidance, proposed concrete samples will be collected by drilling a nominal one-inch diameter hole using a rotary impact hammer drill to generate a fine concrete powder suitable for analysis. The powder is to be placed in a laboratory supplied sample container for laboratory analysis. The procedure can be used to collect concrete samples within the upper 6 inches of concrete at each proposed location. As with the soil samples, the concrete samples submitted to the laboratory will be labeled with the sample identification number, the time and date of collection, the analysis requested, and the initials of the sampler. The samples will be stored in an ice-chilled cooler and submitted to the laboratory under strict chain-of-custody protocols. LFR shall coordinate with the laboratory for the delivery of collected soil samples under chain-of-custody protocols for chemical analysis.

Analytical Methods

The samples of the building materials will be submitted for PCB analyses using USEPA SW-846 Method 8082.

Sampling Equipment Decontamination

Sampling equipment cleaning procedures are described in this section. Specifications for standard cleaning materials referred to in this section are as follows:

- Soap will be a standard brand of phosphate-free laboratory detergent such as Liquinox®. Use of other detergent must be justified and documented in the field logbooks.
- Tap water may be used from any municipal water treatment system. Use of an untreated potable water supply is not an acceptable substitute for tap water.
- Organic/analyte free water is defined as tap water that has been treated with activated carbon and deionizing units.

Improperly handled cleaning solutions may easily become contaminated. Storage and application containers must be constructed of the proper materials to ensure their integrity. Following are acceptable materials used containing the specified cleaning solutions:

- Soap must be kept in clean plastic, metal, or glass containers until used. It should be poured directly from the container during use.
- Tap water must be kept in clean tanks, hand pressure sprayers, and squeeze bottles, applied directly from a hose.
- Analyte free water must be stored in clean glass, stainless steel, or plastic containers that can be closed prior to use. It can be applied form plastic squeeze bottles.
- Organic/analyte free water must be stored in clean glass, Teflon®, or stainless steel containers prior to use. It may be applied using Teflon® squeeze bottles.

Sampling Equipment Decontamination Procedure

The following procedures are to be used for all sampling equipment (hand tools or power tools). When appropriate disposable equipment (one time use) will be used :

1. Clean with tap water and soap using a brush if necessary to remove particulate matter and surface films.
2. Rinse thoroughly with tap water
3. Cover the equipment with plastic. Equipment stored overnight should be wrapped in aluminum foil and covered with clean, unused plastic.

AIR SAMPLE ANALYTICAL METHODS

FORMULA: Table 1 MW: Table 1 CAS: Table 1 RTECS: Table 1

METHOD: 1501, Issue 3 **EVALUATION: Full** **Issue 1: 15 August 1990**
Issue 3: 15 March 2003

OSHA : Table 2
NIOSH: Table 2
ACGIH: Table 2

PROPERTIES: Table 1

SYNONYMS: (Synonyms in Table 1)
Group A: benzene; toluene; ethylbenzene; o-xylene; m-xylene; p-xylene
Group B: cumene; p-tert-butyltoluene; α-methylstyrene; β-methylstyrene; styrene

SAMPLING

SAMPLER: SOLID SORBENT TUBE (coconut shell charcoal, 100 mg/50 mg)

FLOW RATE: Table 3

VOL-MIN: Table 3
-MAX: Table 3

SHIPMENT: Routine

SAMPLE STABILITY: 30 days @ 5°C

BLANKS: 10% of samples

ACCURACY

RANGE STUDIED: Table 3

BIAS: Table 3

OVERALL PRECISION ($\hat{S}_{rT}$): Table 3

ACCURACY: Table 3

MEASUREMENT

TECHNIQUE: GAS CHROMATOGRAPHY, FID

ANALYTE: Hydrocarbons listed above

DESORPTION: 1 mL CS_2, stand 30 min with agitation

INJECTION VOLUME: 1 µL (Group A: split 5:1; Group B: split 1:1)

TEMPERATURE
-INJECTION: 250 °C
-DETECTOR: 300 °C
-COLUMN: Group A: 40 °C (10 min) to 230°C (10 °C/min)
Group B: 35°C (8 min) to 225°C (10°C/min)

CARRIER GAS: He @ 2.6 mL/min

COLUMN: Capillary, fused silica
Group A: 30m x 0.32-mm ID; 1-µm film 100% PEG or equivalent
Group B: 30m x 0.53-mm ID; 3-µm film crossbonded® 35% diphenyl 65% dimethyl polysiloxane or equivalent

CALIBRATION: Solutions of analytes in CS_2

RANGE: Table 4

ESTIMATED LOD: Table 4

PRECISION ($\hat{S}_r$): Table 4

APPLICABILITY: This method is for peak, ceiling, and TWA determinations of aromatic hydrocarbons. Interactions between analytes may reduce breakthrough volumes and affect desorption efficiencies. Naphthalene, originally validated in S292 [4], failed to meet acceptable desorption efficiency recovery and storage stability criteria at the levels evaluated in this study. However, the application of this method to naphthalene levels at or near the REL/PEL continues to meet acceptable recovery criteria. Styrene failed to meet acceptable recovery criteria at the two lowest levels evaluated in this study (highest level to meet the criteria was 181 µg/sample).

INTERFERENCES: Under conditions of high humidity, the breakthrough volumes may be reduced. Other volatile organic compounds such as alcohols, ketones, ethers, and halogenated hydrocarbons are potential analytical interferences.

OTHER METHODS: This method updates NMAM 1501 issued on August 15, 1994 [1] which was based upon P&CAM 127 (benzene, styrene, toluene, and xylene) [2]; S22 (p-tert-butyltoluene) [3]; S23 (cumene) [3]; S29 (ethylbenzene) [3] ; S26 (α-methylstyrene) [3]; S30 (styrene); S311 (benzene) [4]; S343 (toluene) [4]; and S318 (xylenes) [4].

REAGENTS:

1. Carbon disulfide*, low benzene, chromatographic quality.
2. Analytes, reagent grade.
3. Helium, prepurified and filtered.
4. Hydrogen, prepurified and filtered.
5. Air, prepurified and filtered.

* See SPECIAL PRECAUTIONS

EQUIPMENT:

1. Sampler: glass tube, 7 cm long, 6-mm OD, 4-mm ID, flame-sealed ends, containing two sections of activated coconut shell charcoal (front = 100 mg, back = 50 mg) separated by a 2-mm urethane foam plug. A silylated glass wool plug precedes the front section and a 3-mm urethane foam plug follows the back section. Tubes are commercially available.
2. Personal sampling pump, 0.01 to 1.0 L/min (Table 3), with flexible connecting tubing.
3. Gas chromatograph, FID, integrator, and columns (page 1501-1).
4. Autosampler vials, glass, 1.8 mL, with PTFE-lined caps.
5. Pipets, 1-mL, and pipet bulb.
6. Syringes, 10-µL, 25-µL, and 250-µL.
7. Volumetric flasks, 10-mL.

SPECIAL PRECAUTIONS: Carbon disulfide is toxic and extremely flammable (flash point = -30°C), benzene is a suspect carcinogen. Prepare standards and samples in a well ventilated hood.

SAMPLING:

1. Calibrate each personal sampling pump with a representative sampler in line.
2. Break the ends of the sampler immediately before sampling. Attach sampler to personal sampling pump with flexible tubing.
3. Sample at an accurately known flow rate between 0.01 and 0.2 L/min for a total sample size as shown in Table 3.
4. Cap the samplers with plastic (not rubber) caps and pack securely for shipment.

SAMPLE PREPARATION:

5. Place the front and back sorbent sections of the sampler tube in separate vials. Include the glass wool plug in the vial along with the front sorbent section.
6. Add 1.0 mL eluent to each vial. Attach crimp cap to each vial immediately.
7. Allow to stand at least 30 min with occasional agitation.

CALIBRATION AND QUALITY CONTROL:

8. Calibrate daily with at least six working standards from below the LOD to 10 times the LOQ. If necessary, additional standards may be added to extend the calibration curve.
   a. Add known amounts of analytes to carbon disulfide solvent in 10-mL volumetric flasks and dilute to the mark. Prepare additional standards by serial dilution in 10-mL volumetric flasks.
   b. Analyze together with samples and blanks (steps 11 through 12).
   c. Prepare calibration graph (peak area of analyte vs. µg analyte per sample).

9. Determine desorption efficiency (DE) at least once for each batch of charcoal used for sampling in the calibration range (step 8).
   a. Prepare three tubes at each of five levels plus three media blanks.
   b. Inject a known amount of DE stock solution (5 to 25 µL) directly onto front sorbent section of each charcoal tube with a microliter syringe.
   c. Allow the tubes to air equilibrate for several minutes, then cap the ends of each tube and allow to stand overnight.
   d. Desorb (steps 5 through 7) and analyze together with standards and blanks (steps 11 and 12).
   e. Prepare a graph of DE vs. µg analyte recovered.
10. Analyze a minimum of three quality control blind spikes and three analyst spikes to insure that the calibration graph and DE graph are in control.

MEASUREMENT:

11. Set gas chromatograph according to manufacturer's recommendations and to conditions given on page 1501-1. Inject a 1-µL sample aliquot manually using the solvent flush technique or with an autosampler.
    Note: If peak area is above the linear range of the working standards, dilute with solvent, reanalyze, and apply the appropriate dilution factor in the calculations.

Analyte	Approximate Retention Time (min)
benzene[a]	3.52
toluene[a]	6.13
ethylbenzene[a]	10.65
o-xylene[a]	12.92
m-xylene[a]	11.33
p-xylene[a]	11.04
cumene[b]	18.61
p-tert-butyltoluene[b]	21.45
α-methylstyrene[b]	19.99
β-methylstyrene[b]	20.82
styrene[b]	18.33

[a] Separation achieved using a 30-m Stabilwax fused silica capillary colum.
[b] Separation achieved using a 30-m Rtx-35 fused silica capillary column.

12. Measure peak areas.

CALCULATIONS:

13. Determine the mass, µg (corrected for DE) of analyte found in the sample front (W_f) and back (W_b) sorbent sections, and in the average media blank front (B_f) and back (B_b) sorbent sections.
    NOTE: If $W_b > W_f/10$, report breakthrough and possible sample loss.
14. Calculate concentration, C, of analyte in the air volume sampled, V (L):

$$C = \frac{(W_f + W_b - B_f - B_b)}{V}, mg/m^3$$

NOTE: µg/L = mg/m^3

EVALUATION OF METHOD:

The desorption efficiency, at levels ranging from 5 times the LOQ to 0.1x the REL, was determined for each analyte by spiking known amounts (in CS_2) on coconut shell charcoal tubes. Both groups of analytes (A and B) were spiked together on the charcoal sorbent tubes. All analytes, with the exception of styrene and naphthalene, exhibited acceptable desorption efficiency recovery results at all five levels evaluated. Styrene failed to meet the 75% recovery criteria at the 18.1 µg and 90.6 µg levels. Naphthalene failed to meet the 75% criteria at all levels evaluated ranging from 48.8 µg to 976.0 µg.

Each analyte, at a level approximately 0.05x REL/PEL, was evaluated for its storage stability @ 5°C after 7, 14, and 30 days. All analytes, with the exception of naphthalene, had acceptable recoveries after 30 days storage.

REFERENCES:

[1] NIOSH [1984]. Hydrocarbons, Aromatic: Method 1501. In: Eller PM, ed. NIOSH Manual of Analytical Methods. 4th rev. ed. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 94-113.

[2] NIOSH [1977]. NIOSH Manual of Analytical Methods, 2nd. ed., V. 1, P&CAM 127, U.S. Department of Health, Education, and Welfare, Publ. (NIOSH) 77-157-A.

[3] Ibid, V. 2, S22, S23, S25, S26, S29, S30, U.S. Department of Health, Education, and Welfare, Publ. (NIOSH) 77-157-B (1977).

[4] Ibid, V. 3, S292, S311, S318, S343, U.S. Department of Health, Education, and Welfare, Publ. (NIOSH) 77-157-C (1977).

[5] NIOSH [1977]. Documentation of the NIOSH Validation Tests, S22, S23, S25, S26, S29, S30, S292, S311, S318, S343, U.S. Department of Health, Education, and Welfare; Publ. (NIOSH) 77-185.

METHOD WRITTEN BY:

Stephanie M. Pendergrass, NIOSH/DART

TABLE 1. SYNONYMS, FORMULA, MOLECULAR WEIGHT, PROPERTIES

Name/Synonyms	Empirical Formula	Molecular Weight	Boiling Point (°C)	Vapor Pressure @ 25 °C (mm Hg)	(kPa)	Density @ 20 °C (g/mL)
benzene CAS #71-43-2 RTECS CY1400000	C_6H_6	78.11	80.1	95.2	12.7	0.879
p-tert-butyltoluene CAS #98-51-1 RTECS XS8400000 1-tert-butyl-4-methylbenzene	$C_{11}H_{16}$	148.25	192.8	0.7	0.09	0.861
cumene CAS #98-82-8 RTECS GR8575000 isopropylbenzene	C_9H_{12}	120.20	152.4	4.7	0.63	0.862
ethylbenzene CAS #100-41-4 RTECS DA0700000	C_8H_{10}	106.17	136.2	9.6	1.28	0.867
α-methylstyrene CAS #98-83-9 RTECS WL5075300 isopropenylbenzene (1-methylethenyl)-benzene	C_9H_{10}	118.18	165.4	2.5	0.33	0.909
β-methylstyrene CAS #873-66-5 RTECS DA8400500	C_9H_{10}	118.18	175.0	—	—	0.911
toluene CAS #108-88-3 RTECS XS5250000 methylbenzene	C_7H_8	92.14	110.6	28.4	3.79	0.867
xylene[c]	C_8H_{10}	106.17				
CAS #1330-20-7	(ortho)		144.4	6.7	0.89	0.880
RTECS ZE2100000	(meta)		139.1	8.4	1.12	0.864
dimethylbenzene (p-xylene)	(para)		138.4	8.8	1.18	0.861
styrene CAS #100-42-5 RTECS WL3675000 vinylbenzene	C_8H_8	104.15	145.2	6.1	0.81	0.906

TABLE 2. PERMISSIBLE EXPOSURE LIMITS, PPM

		NIOSH			ACGIH		
Substance	OSHA TWA	TWA	C	STEL	TLV	STEL	mg/m³ per ppm
benzene	1	0.1[a]	1		10[b]		3.19
p-tert-butyltoluene	10	10		20	1		6.06
cumene	50 (skin)	50 (skin)			50 (skin)		4.91
ethylbenzene	100	100		125	100	125	4.34
α-methylstyrene	100	50		100	50	100	4.83
β-methylstyrene	100	50		100	50	100	4.83
toluene	200	100		150	50 (skin)		3.77
o-xylene	100	100[c]		150	100	150	4.34
m-xylene	100	100			100	150	4.34
p-xylene	100	100			100	150	4.34
styrene	100	50		100	50	100 (skin)	4.26

[a] Potential carcinogen
[b] Suspect carcinogen
[c] Group I Pesticide

TABLE 3. SAMPLING FLOWRATE[a], VOLUME, CAPACITY, RANGE, OVERALL BIAS AND PRECISION

	Sampling			Breakthrough		Range at	Overall		
	Flowrate	Volume[b] (L)		Volume @ Concentration		VOL-MIN	Bias	Precision	Accuracy
Substance	(L/min)	MIN	MAX	(L)	(mg/m³)	(mg/m³)	(%)	($\hat{S}_{r_T}$)	(±%)
benzene	≤0.20	5	30	>45	149	42 - 165	-0.4	0.059	11.4
p-tert-butyltoluene	≤0.20	1	29	44	112	29 - 119	-10.3	0.071[c]	20.7
cumene	≤0.20	1	30	>45	480	120 - 480	5.6	0.059	15.2
ethylbenzene	≤0.20	1	24	35	917	222 - 884	-7.6	0.089[c]	17.1
α-methylstyrene	≤0.20	1	30	>45	940	236 - 943	-7.6	0.061[c]	16.9
β-methylstyrene	≤0.20	1	30	>45	940	236 - 943	-7.6	0.061	16.9
toluene	≤0.20	1	8	12	2294	548 - 2190	1.6	0.052	10.9
xylene (o-,m-,p-)	≤0.20	2	23	35	870	218 - 870	-1.2	0.060	12.2
styrene	≤1.00	1	14	21	1710	426 - 1710	-7.9	0.058[c]	16.7

[a] Minimum recommended flow is 0.01 L/min.
[b] V_{Min} = minimum sample volume @ OSHA TWA;
V_{Max} = maximum sample volume @ OSHA TWA
[c] Corrected value, calculated from data in Reference 5.

TABLE 4. MEASUREMENT RANGE AND PRECISION[a]

Substance	LOD (µg/sample)	Measurement	
		Range (mg)	Precision ($\hat{S}_r$)
benzene	0.5	0.004-0.35	0.013
p-tert-butyltoluene	1.1	0.013-1.09	0.017[a]
cumene	0.6	0.039-3.46	0.017
ethylbenzene	0.5	0.045-8.67	0.015
α-methylstyrene	0.6	0.036-3.57	0.014
β-methylstyrene	0.6	0.036-0.728	0.014
toluene	0.7	0.024-4.51	0.022
o-xylene	0.8	0.044-10.4	0.014
m-xylene	0.8	0.043-0.864	0.013
p-xylene	0.7	0.043-0.861	0.015
styrene	0.4	0.181-8.49	0.014

[a] Corrected value, calculated from data in [5].

mixture: $C_{12}H_{10-x}Cl_x$ [where x = 1 to 10] MW: ca. 258 (42% Cl ; $C_{12}H_7Cl_3$); ca. 326 (54% Cl ; $C_{12}H_5Cl_5$) CAS: Table 1 RTECS: Table 1

METHOD: 5503, Issue 2 **EVALUATION: PARTIAL** **Issue 1: 15 February 1984**
Revision #1: 15 August 1987
Issue 2: 15 August 1994

OSHA : 1 mg/m^3 (42% Cl); 0.5 mg/m^3 (54% Cl)
NIOSH: 0.001 mg/m^3/10 h (carcinogen)
ACGIH: 1 mg/m^3 (42% Cl) (skin); 0.5 mg/m^3 (54% Cl) (skin)

PROPERTIES: 42% Cl: BP 325 to 366 °C; MP -19 °C; d 1.38 g/mL @ 25 °C; VP 0.01 Pa (8 x 10^{-5} mm Hg; 1 mg/m^3) @ 20 °C
54% Cl: BP 365 to 390 °C; MP 10 °C; d 1.54 g/mL @ 25 °C; VP 0.0004 Pa (3 x 10^{-6} mm Hg; 0.05 mg/m^3) @ 20 °C

SYNONYMS: PCB; 1,1'-biphenyl chloro; chlorodiphenyl, 42% Cl (Aroclor 1242); and 54% Cl (Aroclor 1254)

SAMPLING

SAMPLER: FILTER + SOLID SORBENT (13-mm glass fiber + Florisil, 100 mg/50 mg)

FLOW RATE: 0.05 to 0.2 L/min or less

VOL-MIN: 1 L @ 0.5 mg/m^3
-MAX: 50 L

SHIPMENT: transfer filters to glass vials after sampling

SAMPLE STABILITY: unknown for filters; 2 months for Florisil tubes [1]

BLANKS: 2 to 10 field blanks per set

ACCURACY

RANGE STUDIED: not studied

BIAS: none identified

OVERALL PRECISION ($\hat{S}_{rT}$): not evaluated

ACCURACY: not determined

MEASUREMENT

TECHNIQUE: GAS CHROMATOGRAPHY, ECD (^{63}Ni)

ANALYTE: polychlorobiphenyls

DESORPTION: filter + front section, 5 mL hexane; back section, 2 mL hexane

INJECTION VOLUME: 4-µL with 1-µL backflush

TEMPERATURE-INJECTION: 250 to 300 °C
-DETECTOR: 300 to 325 °C
-COLUMN: 180 °C

CARRIER GAS: N_2, 40 mL/min

COLUMN: glass, 1.8 m x 2-mm ID, 1.5% OV-17/1.95% QF-1 on 80/100 mesh Chromosorb WHP

CALIBRATION: standard PCB mixture in hexane

RANGE: 0.4 to 4 µg per sample [2]

ESTIMATED LOD: 0.03 µg per sample [2]

PRECISION ($\hat{S}_r$): 0.044 [1]

APPLICABILITY: The working range is 0.01 to 10 mg/m^3 for a 40-L air sample [1]. With modifications, surface wipe samples may be analyzed [3,4].

INTERFERENCES: Chlorinated pesticides, such as DDT and DDE, may interfere with quantification of PCB. Sulfur-containing compounds in petroleum products also interfere [5].

OTHER METHODS: This method revises methods S120 [6] and P&CAM 244 [1]. Methods S121 [7] and P&CAM 253 [8] for PCB have not been revised.

REAGENTS:

1. Hexane, pesticide quality.
2. Florisil, 30/48 mesh sieved from 30/60 mesh. After sieving, dry at 105 °C for 45 min. Mix the cooled Florisil with 3% (w/w) distilled water.
3. Nitrogen, purified.
4. Stock standard solution of the PCB in methanol or isooctane (commercially available).*

* See SPECIAL PRECAUTIONS.

EQUIPMENT:

1. Sampler: 13-mm glass fiber filter without binders in a Swinnex cassette (Cat. No. SX 0001300, Millipore Corp.) followed by a glass tube, 7 cm long, 6-mm OD, 4-mm ID containing two sections of 30/48 mesh deactivated Florisil. The front section is preceded by glass wool and contains 100 mg and the backup section contains 50 mg; urethane foam between sections and behind the backup section. (SKC 226-39, Supelco ORBO-60, or equivalent) Join the cassette and Florisil tube with PVC tubing, 3/8" L x 9/32" OD x 5/32" ID, on the outlet of the cassette and with another piece of PVC tubing, 3/4" L x 5/16" OD x 3/16" ID, complete the union.
2. Personal sampling pump, 0.05 to 0.2 L/min, with flexible connecting tubing.
3. Tweezers.
4. Vials, glass, 4- and 7-mL, with aluminum or PTFE-lined caps
5. Gas chromatograph, electron capture detection (^{63}Ni), integrator and column (page 5503-1).
6. Volumetric flasks, 10-mL and other convenient sizes for preparing standards.
7. Syringe, 10-µL.

SPECIAL PRECAUTIONS: Avoid prolonged or repeated contact of skin with PCB and prolonged or repeated breathing of the vapor [9-11].

SAMPLING:

1. Calibrate each personal sampling pump with a representative sampler in line.
2. Break the ends of the Florisil tube immediately before sampling. Connect Florisil tube to Swinnex cassette and attach sampler to personal sampling pump with flexible tubing.
3. Sample at an accurately known flow rate between 0.05 and 0.2 L/min for a total sample size of 1 to 50 L.
   NOTE: At low PCB concentrations, the sampler was found to be efficient when operated at flow rates up to 1 L/min, for 24 hours [4]. Under these conditions, the limit of detection was 0.02 µg/m^3.
4. Transfer the glass fiber filters to 7-mL vials. Cap the Florisil tubes with plastic (not rubber) caps and pack securely for shipment.

SAMPLE PREPARATION:

5. Place the glass wool and 100-mg Florisil bed in the same 7-mL vial in which the filter was stored. Add 5.0 mL hexane.
6. In a 4-mL vial, place the 50-mg Florisil bed including the two urethane plugs. Add 2.0 mL hexane.
7. Allow to stand 20 min with occasional agitation.

CALIBRATION AND QUALITY CONTROL:

8. Calibrate daily with at least six working standards over the range 10 to 500 ng/mL PCB.
   a. Add known amounts of stock standard solution to hexane in 10-mL volumetric flasks and dilute to the mark.
   b. Analyze together with samples and blanks (steps 11 and 12).
   c. Prepare calibration graph (sum of areas of selected peaks vs. ng PCB per sample).
9. Determine desorption efficiency (DE) at least once for each lot of glass fiber filters and Florisil used for sampling in the calibration range (step 8). Prepare three tubes at each of five levels plus three media blanks.
   a. Remove and discard back sorbent section of a media blank Florisil tube.
   b. Inject known amounts of stock standard solution directly onto front sorbent section and onto a media blank filter with a microliter syringe.
   c. Cap the tube. Allow to stand overnight.
   d. Desorb (steps 5 through 7) and analyze together with working standards (steps 11 and 12).
   e. Prepare a graph of DE vs. µg PCB recovered.
10. Analyze three quality control blind spikes and three analyst spikes to ensure that the calibration graph and DE graph are in control.

MEASUREMENT:

11. Set gas chromatograph according to manufacturer's recommendations and to conditions given on page 5503-1. Inject sample aliquot manually using solvent flush technique or with autosampler.
    NOTE 1: Where individual identification of PCB is needed, a procedure using a capillary column may be used [12].
    NOTE 2: If peak area is above the linear range of the working standards, dilute with hexane, reanalyze and apply the appropriate dilution factor in calculations.
12. Sum the areas for five or more selected peaks.

CALCULATIONS:

13. Determine the mass, µg (corrected for DE) of PCB found on the glass fiber filter (W) and in the Florisil front (W_f) and back (W_b) sorbent sections, and in the average media blank filter (B) and front (B_f) and back (B_b) sorbent sections.
    NOTE: If $W_b > W_f/10$, report breakthrough and possible sample loss.
14. Calculate concentration, C, of PCB in the air volume sampled, V (L):

$$C = \frac{(W + W_f + W_b - B - B_f - B_b)}{V}, \text{ mg/m}^3.$$

EVALUATION OF METHOD:

This method uses 13-mm glass fiber filters which have not been evaluated for collecting PCB. In Method S120, however, Aroclor 1242 was completely recovered from 37-mm glass fiber filters using 15 mL isooctane [8,13,14]. With 5 mL of hexane, Aroclor 1016 was also completely recovered from 100-mg Florisil beds after one-day storage [1]. Thus, with no adsorption effect likely on glass fiber filters for PCB, 5 mL hexane should be adequate to completely extract PCB from combined filters and front sorbent sections. Sample stability on glass fiber filters has not been investigated. Breakthrough volume was >48 L for the Florisil tube at 75% RH in an atmosphere containing 10 mg/m ^{3} Aroclor 1016 [1].

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METHOD REVISED BY:

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Table 1. General Information.

Compound	CAS	RTECS
Polychlorinated Biphenyls	1336-36-3	TQ1350000
Chlorobiphenyl	27323-18-8	DV2063000
Aroclor 1016 (41% Cl)	12674-11-2	TQ1351000
Aroclor 1242 (42% Cl)	53469-21-9	TQ1356000
Aroclor 1254 (54% Cl)	11097-69-1	TQ1360000

Table 2. Composition of some Aroclors [15].

Major Components	Aroclor 1016	Aroclor 1242	Aroclor 1254
Biphenyl	0.1%	<0.1%	<0.1%
Monochlorobiphenyls	1	1	<0.1
Dichlorobiphenyls	20	16	0.5
Trichlorobiphenyls	57	49	1
Tetrachlorobiphenyls	21	25	21
Pentachlorobiphenyls	1	8	48
Hexachlorobiphenyls	<0.1	1	23
Heptachlorobiphenyls	none detected	<0.1	6
Octachlorobiphenyls	none detected	none detected	none detected

ELEMENTS by ICP (Nitric/Perchloric Acid Ashing) 7300

MW: Table 1 CAS: Table 2 RTECS: Table 2

METHOD: 7300, Issue 3 **EVALUATION: PARTIAL** **Issue 1: 15 August 1990**
Issue 3: 15 March 2003

OSHA: Table 2
NIOSH: Table 2
ACGIH: Table 2

PROPERTIES: Table 1

ELEMENTS:

aluminum*	calcium	lanthanum	nickel	strontium	tungsten*
antimony*	chromium*	lithium*	potassium	tellurium	vanadium*
arsenic	cobalt*	magnesium	phosphorus	tin	yttrium
barium	copper	manganese*	selenium	thallium	zinc
beryllium*	iron	molybdenum*	silver	titanium	zirconium*
cadmium	lead*				

*Some compounds of these elements require special sample treatment.

SAMPLING

SAMPLER: FILTER (0.8-µm, cellulose ester membrane, or 5.0-µm, polyvinyl chloride membrane)

FLOWRATE: 1 to 4 L/min

VOL-MIN: Table 1
-MAX: Table 1

SHIPMENT: routine

SAMPLE STABILITY: stable

BLANKS: 2 to 10 field blanks per set

ACCURACY

RANGE STUDIED: not determined

BIAS: not determined

OVERALL PRECISION ($\hat{S}_{rT}$): not determined

ACCURACY: not determined

MEASUREMENT

TECHNIQUE: INDUCTIVELY COUPLED ARGON PLASMA, ATOMIC EMISSION SPECTROSCOPY (ICP-AES)

ANALYTE: elements above

ASHING REAGENTS: conc. HNO_3/ conc. $HClO_4$ (4:1), 5 mL; 2mL increments added as needed

CONDITIONS: room temperature, 30 min; 150 °C to near dryness

FINAL SOLUTION: 4% HNO_3, 1% $HClO_4$, 25 mL

WAVELENGTH: depends upon element; Table 3

BACKGROUND CORRECTION: spectral wavelength shift

CALIBRATION: elements in 4% HNO_3, 1% $HClO_4$

RANGE: varies with element [1]

ESTIMATED LOD: Tables 3 and 4

PRECISION ($\bar{S}$): Tables 3 and 4

APPLICABILITY: The working range of this method is 0.005 to 2.0 mg/m^3 for each element in a 500-L air sample. This is simultaneous elemental analysis, not compound specific. Verify that the types of compounds in the samples are soluble with the ashing procedure selected.

INTERFERENCES: Spectral interferences are the primary interferences encountered in ICP-AES analysis. These are minimized by judicious wavelength selection, interelement correction factors and background correction [1-4].

OTHER METHODS: This issue updates issues 1 and 2 of Method 7300, which replaced P&CAM 351 [3] for trace elements. Flame atomic absorption spectroscopy (e.g., Methods 70XX) is an alternate analytical technique for many of these elements. Graphite furnace AAS (e.g., 7102 for Be, 7105 for Pb) is more sensitive.

REAGENTS:

1. Nitric acid (HNO_3), conc., ultra pure.
2. Perchloric acid ($HClO_4$), conc., ultra pure.*
3. Ashing acid: 4:1 (v/v) HNO_3:$HClO_4$. Mix 4 volumes conc. HNO_3 with 1 volume conc. $HClO_4$.
4. Calibration stock solutions, 1000 µg/mL. Commercially available, or prepared per instrument manufacturer's recommendation (see step 12).
5. Dilution acid, 4% HNO_3, 1% $HClO_4$. Add 50 mL ashing acid to 600 mL water; dilute to 1 L.
6. Argon.
7. Distilled,deionized water.

* See SPECIAL PRECAUTIONS.

EQUIPMENT:

1. Sampler: cellulose ester membrane filter, 0.8-µm pore size; or polyvinyl chloride membrane, 5.0-µm pore size; 37-mm diameter, in cassette filter holder.
2. Personal sampling pump, 1 to 4 L/min, with flexible connecting tubing.
3. Inductively coupled plasma-atomic emission spectrometer, equipped as specified by the manufacturer for analysis of elements of interest.
4. Regulator, two-stage, for argon.
5. Beakers, Phillips, 125-mL, or Griffin, 50-mL, with watchglass covers.**
6. Volumetric flasks, 10-, 25-,100-mL., and 1-L**
7. Assorted volumetric pipets as needed.**
8. Hotplate, surface temperature 150 °C.

** Clean all glassware with conc. nitric acid and rinse thoroughly in distilled water before use.

SPECIAL PRECAUTIONS: All perchloric acid digestions are required to be done in a perchloric acid hood. When working with concentrated acids, wear protective clothing and gloves.

SAMPLING:

1. Calibrate each personal sampling pump with a representative sampler in line.
2. Sample at an accurately known flow rate between 1 and 4 L/min for a total sample size of 200 to 2000 L (see Table 1) for TWA measurements. Do not exceed a filter loading of approximately 2 mg total dust.

SAMPLE PREPARATION:

3. Open the cassette filter holders and transfer the samples and blanks to clean beakers.
4. Add 5 mL ashing acid. Cover with a watchglass. Let stand 30 min at room temperature.
   NOTE: Start a reagent blank at this step.
5. Heat on hotplate (120 °C) until ca. 0.5 mL remains.
   NOTE 1: Recovery of lead from some paint matrices may require other digestion techniques. See Method 7082 (Lead by Flame AAS) for an alternative hotplate digestion procedure or Method 7302 for a microwave digestion procedure.
   NOTE 2: Some species of Al, Be, Co, Cr, Li, Mn, Mo, V, and Zr will not be completely solubilized by this procedure. Alternative solubilization techniques for most of these elements can be found elsewhere [5-10]. For example, aqua regia may be needed for Mn [6,12].
6. Add 2 mL ashing acid and repeat step 5. Repeat this step until the solution is clear.
7. Remove watchglass and rinse into the beaker with distilled water.
8. Increase the temperature to 150 °C and take the sample to near dryness (ca. 0.5 mL).
9. Dissolve the residue in 2 to 3 mL dilution acid.
10. Transfer the solutions quantitatively to 25-mL volumetric flasks.
11. Dilute to volume with dilution acid.
    NOTE: If more sensitivity is required, the final sample volume may be held to 10 mL.

CALIBRATION AND QUALITY CONTROL:

12. Calibrate the spectrometer according to the manufacturers recommendations.
    NOTE: Typically, an acid blank and 1.0 µg/mL multielement working standards are used. The following multielement combinations are chemically compatible in 4% HNO_3/1% $HClO_4$:
    a. Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, La, In, Na
    b. Ag, K, Li, Mg, Mn, Ni, P, Pb, Se, Sr, Tl, V, Y, Zn, Sc
    c. Mo, Sb, Sn, Te, Ti, W, Zr
    d. Acid blank
13. Analyze a standard for every ten samples.
14. Check recoveries with at least two spiked blank filters per ten samples.

MEASUREMENT:

15. Set spectrometer to conditions specified by manufacturer.
16. Analyze standards and samples.
    NOTE: If the values for the samples are above the range of the standards, dilute the solutions with dilution acid, reanalyze and apply the appropriate dilution factor in the calculations.

CALCULATIONS:

17. Obtain the solution concentrations for the sample, C_s (µg/mL), and the average media blank, C_b (µg/mL), from the instrument.
18. Using the solution volumes of sample, V_s (mL), and media blank, V_b (mL), calculate the concentration, C (mg/m^3), of each element in the air volume sampled, V (L):

$$C = \frac{CsVs - CbVb}{V}, mg/m^3$$

NOTE: µg/L ≡ mg/m^3

EVALUATION OF METHOD:

Issues 1 and 2
Method, 7300 was originally evaluated in 1981 [2,3]. The precision and recovery data were determined at 2.5 and 1000 µg of each element per sample on spiked filters. The measurements used for the method evaluation in Issues 1 and 2 were determined with a Jarrell-Ash Model 1160 Inductively Coupled Plasma Spectrometer operated according to manufacturer's instructions.

Issue 3
In this update of NIOSH Method 7300, the precision and recovery data were determined at approximately 3x and 10x the instrumental detection limits on commercially prepared spiked filters [12] using 25.0 mL as the final sample volume. Tables 3 and 4 list the precision and recovery data, instrumental detection limits, and analytical wavelengths for mixed cellulose ester (MCE) and polyvinyl chloride (PVC) filters. PVC Filters which can be used for total dust measurements and then digested for metals measurements were tested and found to give good results. The values in Tables 3 and 4 were determined with a Spectro Analytical Instruments Model End On Plasma (EOP)(axial) operated according to manufacturer's instructions.

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TABLE 1. PROPERTIES AND SAMPLING VOLUMES

Element (Symbol)	Properties: Atomic Weight	Properties: MP, °C	Air Volume, L @ OSHA PEL: MIN	Air Volume, L @ OSHA PEL: MAX
Silver (Ag)	107.87	961	250	2000
Aluminum (Al)	26.98	660	5	100
Arsenic (As)	74.92	817	5	2000
Barium (Ba)	137.34	710	50	2000
Beryllium (Be)	9.01	1278	1250	2000
Calcium (Ca)	40.08	842	5	200
Cadmium (Cd)	112.40	321	13	2000
Cobalt (Co)	58.93	1495	25	2000
Chromium (Cr)	52.00	1890	5	1000
Copper (Cu)	63.54	1083	5	1000
Iron (Fe)	55.85	1535	5	100
Potassium (K)	39.10	63.65	5	1000
Lanthanum	138.91	920	5	1000
Lithium (Li)	6.94	179	100	2000
Magnesium (Mg)	24.31	651	5	67
Manganese (Mn)	54.94	1244	5	200
Molybdenum (Mo)	95.94	651	5	67
Nickel (Ni)	58.71	1453	5	1000
Phosphorus (P)	30.97	44	25	2000
Lead (Pb)	207.19	328	50	2000
Antimony (Sb)	121.75	630.5	50	2000
Selenium (Se)	78.96	217	13	2000
Tin (Sn)	118.69	231.9	5	1000
Strontium (Sr)	87.62	769	10	1000
Tellurium (Te)	127.60	450	25	2000
Titanium (Ti)	47.90	1675	5	100
Thallium (Tl)	204.37	304	25	2000
Vanadium (V)	50.94	1890	5	2000
Tungsten (W)	183.85	3410	5	1000
Yttrium (Y)	88.91	1495	5	1000
Zinc (Zn)	65.37	419	5	200
Zirconium (Zr)	91.22	1852	5	200

TABLE 2. EXPOSURE LIMITS, CAS #, RTECS

Element (Symbol)	CAS #	RTECS	Exposure Limits, mg/m³ (Ca = carcinogen) OSHA	NIOSH	ACGIH
Silver (Ag)	7440-22-4	VW3500000	0.01 (dust, fume, metal)	0.01 (metal, soluble)	0.1 (metal) 0.01 (soluble)
Aluminum (Al)	7429-90-5	BD0330000	15 (total dust) 5 (respirable)	10 (total dust) 5 (respirable fume) 2 (salts, alkyls)	10 (dust) 5 (powders, fume) 2 (salts, alkyls)
Arsenic (As)	7440-38-2	CG0525000	varies	C 0.002, Ca	0.01, Ca
Barium (Ba)	7440-39-3	CQ8370000	0.5	0.5	0.5
Beryllium (Be)	7440-41-7	DS1750000	0.002, C 0.005	0.0005, Ca	0.002, Ca
Calcium (Ca)	7440-70-2	--	varies	varies	varies
Cadmium (Cd)	7440-43-9	EU9800000	0.005	lowest feasible, Ca	0.01 (total), Ca 0.002 (respir.), Ca
Cobalt (Co)	7440-48-4	GF8750000	0.1	0.05 (dust, fume)	0.02 (dust, fume)
Chromium (Cr)	7440-47-3	GB4200000	0.5	0.5	0.5
Copper (Cu)	7440-50-8	GL5325000	1 (dust, mists) 0.1 (fume)	1 (dust) 0.1 (fume)	1 (dust, mists) 0.2 (fume)
Iron (Fe)	7439-89-6	NO4565500	10 (dust, fume)	5 (dust, fume)	5 (fume)
Potassium (K)	7440-09-7	TS6460000	--	--	--
Lanthanum	7439-91-0	--	–	–	--
Lithium (Li)	7439-93-2	--	--	--	--
Magnesium (Mg)	7439-95-4	OM2100000	15 (dust) as oxide 5 (respirable)	10 (fume) as oxide	10 (fume) as oxide
Manganese (Mn)	7439-96-5	OO9275000	C 5	1; STEL 3	5 (dust) 1; STEL 3 (fume)
Molybdenum (Mo)	7439-98-7	QA4680000	5 (soluble) 15 (total insoluble)	5 (soluble) 10 (insoluble)	5 (soluble) 10 (insoluble)
Nickel (Ni)	7440-02-0	QR5950000	1	0.015, Ca	0.1 (soluble) 1 (insoluble, metal)
Phosphorus (P)	7723-14-0	TH3500000	0.1	0.1	0.1
Lead (Pb)	7439-92-1	OF7525000	0.05	0.05	0.05
Antimony (Sb)	7440-36-0	CC4025000	0.5	0.5	0.5
Selenium (Se)	7782-49-2	VS7700000	0.2	0.2	0.2
Tin (Sn)	7440-31-5	XP7320000	2	2	2
Strontium (Sr)	7440-24-6	–	–	–	--
Tellurium (Te)	13494-80-9	WY2625000	0.1	0.1	0.1
Titanium (Ti)	7440-32-6	XR1700000	--	--	--
Thallium (Tl)	7440-28-0	XG3425000	0.1 (skin) (soluble)	0.1 (skin) (soluble)	0.1 (skin)
Vanadium (V)	7440-62-2	YW240000	--	C 0.05	--
Tungsten	7440-33-7	–	5	5 10 (STEL)	5 10 (STEL)
Yttrium (Y)	7440-65-5	ZG2980000	1	N/A	1
Zinc (Zn)	7440-66-6	ZG8600000	–	--	--
Zirconium (Zr)	7440-67-7	ZH7070000	5	5, STEL 10	5, STEL 10

TABLE 3. MEASUREMENT PROCEDURES AND DATA [1].
Mixed Cellulose Ester Filters (0.45 µm)

Element (a)	wavelength nm	Est. LOD µg/ Filter	LOD ng/mL	Certified 3x LOD (b)	% Recovery (c)	Percent RSD (N=25)	Certified 10x LOD (b)	% Recovery (c)	Percent RSD (N=25)
Ag	328	0.042	1.7	0.77	102.9	2.64	3.21	98.3	1.53
Al	167	0.115	4.6	1.54	105.4	11.5	6.40	101.5	1.98
As	189	0.140	5.6	3.08	94.9	2.28	12.9	93.9	1.30
Ba	455	0.005	0.2	0.31	101.8	1.72	1.29	97.7	0.69
Be	313	0.005	0.2	0.31	100.0	1.44	1.29	98.4	0.75
Ca	317	0.908	36.3	15.4	98.7	6.65	64.0	100.2	1.30
Cd	226	0.0075	0.3	0.31	99.8	1.99	1.29	97.5	0.88
Co	228	0.012	0.5	0.31	100.8	1.97	1.29	98.4	0.90
Cr	267	0.020	0.8	0.31	93.4	16.3	1.29	101.2	2.79
Cu	324	0.068	2.7	1.54	102.8	1.47	6.40	100.6	0.92
Fe	259	0.095	3.8	1.54	103.3	5.46	6.40	98.0	0.95
K	766	1.73	69.3	23.0	90.8	1.51	96.4	97.6	0.80
La	408	0.048	1.9	0.77	102.8	2.23	3.21	100.1	0.92
Li	670	0.010	0.4	0.31	110.0	1.91	1.29	97.7	0.81
Mg	279	0.098	3.9	1.54	101.1	8.35	6.40	98.0	1.53
Mn	257	0.005	0.2	0.31	101.0	1.77	1.29	94.7	0.73
Mo	202	0.020	0.8	0.31	105.3	2.47	1.29	98.6	1.09
Ni	231	0.020	0.8	0.31	109.6	3.54	1.29	101.2	1.38
P	178	0.092	3.7	1.54	84.4	6.19	6.40	82.5	4.75
Pb	168	0.062	2.5	1.54	109.4	2.41	6.40	101.7	0.88
Sb	206	0.192	7.7	3.08	90.2	11.4	12.9	**41.3**	32.58
Se	196	0.135	5.4	2.3	87.6	11.6	9.64	84.9	4.78
Sn	189	0.040	1.6	0.77	90.2	18.0	3.21	**49**	21.79
Sr	407	0.005	0.2	0.31	101.0	1.55	1.29	97.3	0.65
Te	214	0.078	3.1	1.54	102.0	2.67	6.40	97.4	1.24
Ti	334	0.050	2.0	0.77	98.4	2.04	3.21	93.4	1.08
Tl	190	0.092	3.7	1.54	100.9	2.48	6.40	99.1	0.80
V	292	0.028	1.1	0.77	103.2	1.92	3.21	98.3	0.84
W	207	0.075	3.0	1.54	**72.2**	10.1	6.40	**57.6**	14.72
Y	371	0.012	0.5	0.31	100.5	1.80	1.29	97.4	0.75
Zn	213	0.310	12.4	4.60	102.2	1.87	19.3	95.3	0.90
Zr	339	0.022	0.9	0.31	88.0	19.4	1.29	**25**	57.87

(a) Bold values are qualitative only because of low recovery.
(b) Values are certified by Inorganic Ventures INC. at 3x and 10x the approximate instrumental LOD
(c) Values reported were obtained with a Spectro Analytical Instruments EOP ICP; performance may vary with instrument and should be independently verified.

TABLE 4. MEASUREMENT PROCEDURES AND DATA [1].
Polyvinyl Chloride Filter (5.0 µm)

Element (c)	wavelength nm	Est. LOD µg per filter	LOD ng/mL	Certified 3x LOD (b)	% Recovery (a)	Percent RSD (N=25)	Certified[17] 10x LOD (b)	% Recovery (a)	Percent RSD (N=25)
Ag	328	0.042	1.7	0.78	104.2	8.20	3.18	81.8	18.9
Al	167	0.115	4.6	1.56	77.4	115.24	6.40	92.9	20.9
As	189	0.140	5.6	3.10	100.7	5.13	12.70	96.9	3.2
Ba	455	0.005	0.2	0.31	102.4	3.89	1.270	99.8	2.0
Be	313	0.005	0.2	0.31	106.8	3.53	1.270	102.8	2.1
Ca	317	0.908	36.3	15.6	**68.1**	12.66	64.00	96.8	5.3
Cd	226	0.0075	0.3	0.31	105.2	5.57	1.27	101.9	2.8
Co	228	0.012	0.5	0.31	109.3	4.67	1.27	102.8	2.8
Cr	267	0.020	0.8	0.31	109.4	5.31	1.27	103.4	4.1
Cu	324	0.068	2.7	1.56	104.9	5.18	6.40	101.8	2.4
Fe	259	0.095	3.8	1.56	88.7	46.82	6.40	99.1	9.7
K	766	1.73	69.3	23.4	96.4	4.70	95.00	99.2	2.2
La	408	0.048	1.9	0.78	**45.5**	4.19	3.18	98.8	2.6
Li	670	0.010	0.4	0.31	107.7	4.80	1.27	110.4	2.7
Mg	279	0.098	3.9	1.56	**54.8**	20.59	6.40	**64.5**	5.7
Mn	257	0.005	0.2	0.31	101.9	4.18	1.27	99.3	2.4
Mo	202	0.020	0.8	0.31	106.6	5.82	1.27	98.1	3.8
Ni	231	0.020	0.8	0.31	111.0	5.89	1.27	103.6	3.2
P	178	0.092	3.7	1.56	101.9	17.82	6.40	86.5	10.4
Pb	168	0.062	2.5	1.56	109.6	6.12	6.40	103.2	2.9
Sb	206	0.192	7.7	3.10	**64.6**	22.54	12.70	**38.1**	30.5
Se	196	0.135	5.4	2.30	83.1	26.23	9.50	76.0	17.2
Sn	189	0.040	1.6	0.78	85.7	27.29	3.18	**52.0**	29.4
Sr	407	0.005	0.2	0.31	**71.8**	4.09	1.27	81.2	2.7
Te	214	0.078	3.1	1.56	109.6	7.49	6.40	97.3	3.8
Ti	334	0.050	2.0	0.78	101.0	9.46	3.18	92.4	5.5
Tl	190	0.092	3.7	1.56	110.3	4.04	6.40	101.9	2.0
V	292	0.028	1.1	0.78	108.3	3.94	3.18	102.5	2.6
W	207	0.075	3.0	1.56	**74.9**	15.79	6.40	**44.7**	19.6
Y	371	0.012	0.5	0.31	101.5	3.63	1.27	101.4	2.5
Zn	213	0.310	12.4	4.70	91.0	68.69	19.1	101.0	9.6
Zr	339	0.022	0.9	0.31	**70.7**	54.20	1.27	**40.4**	42.1

(a) Values reported were obtained with a Spectro Analytical Instruments EOP ICP; performance may vary with instrument and should be independently verified.
(b) Values are certified by Inorganic Ventures INC. at 3x and 10x the approximate instrumental LOD [12].
(c) Bold values are qualitative only because of low recovery. Other digestion techniques may be more appropriate for these elements and their compounds.

Trestler, Lauren

From: Goloubow, Ron
Sent: Wednesday, November 18, 2009 7:21 PM
To: Santos.Carmen@epamail.epa.gov
Cc: Gibbs, Alan
Subject: FW: 1009 66th Avenue Oakland, CA - Confirmation soil samples for Non-PCB excavations
Attachments: PCBs in soil rev2 Layout1 (1).pdf

Carmen –

Per my voice message, we understand that confirmation soil samples that are to be collected from the three areas of excavation that are located OUTSIDE the excavation areas for PCB-affected soil will not be collected for the analysis of PCBs (see attached Figure 2) . These areas are being excavated for soil affected by TPH, metals, or SVOCs and not PCBs. This sampling scheme is appropriate based on the analytical results of PCB analysis for soil sample collected from within (and near) the "footprint" of the proposed areas of excavation (see Figure 2).

Thanks Ron.

Ron Goloubow, P.G.
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510-596-9550 Direct Dial
510-501-1789 Cell
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Trestler, Lauren

From: Goloubow, Ron
Sent: Thursday, January 14, 2010 1:56 PM
To: Santos.Carmen@epamail.epa.gov
Cc: Gibbs, Alan; Goldberg Day, Amy; charles@pacificcharter.org; Mike.Barr@aspirepublicschools.org; Annie.Bauer@aspirepublicschools.org; Wilson.Patrick@epamail.epa.gov; paresh.khatri@acgov.org; MMalinow@dtsc.ca.gov
Subject: Aspire - Oakland, CA - Follow Up to December 10 and 16, 2009 Conference Calls - Cleanup Level and Risk-Based Disposal Approval Application
Attachments: ltr-Aspire-RBCP-Jan10-RV009155.pdf

Carmen and others - attached is the request to change the remedial approach from a Self-Implementing Cleanup Plan (SICP) to a Risk-Based Cleanup Plan (RBCP). Carmen, I will contact you early next week to determine the EPA's schedule regarding the review of the attached letter. Thanks in advance for your prompt attention to this matter and as always please feel free to contact me should you have any questions or concerns regarding this project.

Ron.

Ron Goloubow, PG | Senior Associate Geologist | **ron.goloubow@arcadis-us.com**

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From: Santos.Carmen@epamail.epa.gov [mailto:Santos.Carmen@epamail.epa.gov]
Sent: Friday, December 18, 2009 11:31 AM
To: Goloubow, Ron
Cc: Gibbs, Alan; Goldberg Day, Amy; charles@pacificcharter.org; Mike.Barr@aspirepublicschools.org; Annie.Bauer@aspirepublicschools.org; Wilson.Patrick@epamail.epa.gov; paresh.khatri@acgov.org; MMalinow@dtsc.ca.gov
Subject: PCBs - Aspire Site: Follow Up to December 10 and 16, 2009 Conference Calls - Cleanup Level and Risk-Based Disposal Approval Application
Importance: High

Dear Ron Goloubow:

We had a conference call with you on December 16, 2009 to answer questions that LFR had on USEPA's reply to LFR's December 11, 2009 message (which is included at the end of the attached message string). During that conference call, USEPA clarified that under the self-implementing PCB cleanup option individual cleanup verification samples must meet for PCBs the cleanup level of 0.13 ppm. Under the self-implementing cleanup option, cleanup levels for PCBs are met based on comparison of in-situ soil verification sampling data to the cleanup level and not on statistical analysis of the data. LFR / Aspire may consider applying for a risk-based disposal approval for the PCB cleanup at the Aspire site in Oakland. If this option is elected, LFR / Aspire need to submit a letter to USEPA explaining why LFR / Aspire want now to conduct the PCB cleanup under the risk-based cleanup option (40 CFR 761.61(c)) instead of under the PCB self-implementing cleanup plan (40 CFR 761.61(a)) that USEPA conditionally approved on November 13, 2009. We explained that in accordance with 40 CFR 761.61(c), LFR / Aspire must obtain USEPA's approval of such risk-based disposal application before beginning the PCB cleanup. Further, given a school has been proposed to be built at the Aspire site in Oakland and that ACDEH has approved a cleanup plan with a cumulative risk-based cleanup level of 0.13 ppm, EPA has requested that LFR / Aspire's PCB risk-based cleanup application be consistent with the EPA TSCA PCB regulatory requirements, DTSC School Program requirements, and ACDEH requirements.

As explained during the conference call, under the risk-based PCB cleanup option, the party conducting the cleanup can propose cleanup verification sampling and data handling procedures different than those

required in the PCB self-implementing option to demonstrate compliance with the cleanup level (see 40 CFR 761.61(c)). The LFR risk-based cleanup plan must include all the information already submitted by LFR in its self-implementing PCB cleanup notification (including the written, signed certification) and all risk-based calculations used to derive the 0.13 ppm cleanup level (see 40 CFR 761.61(c)). In addition to PCBs, the cleanup level should encompass all the other contaminants found at the site. In addition, the LFR / Aspire risk-based cleanup application must include all the information we requested in our December 14, 2009 electronic message sent to you at 10:38 AM. The application must include all the calculations that LFR / Aspire will apply in the evaluation of cleanup verification data to demonstrate the 0.13 ppm cleanup level has been met for PCBs and all other contaminants at the site.

USEPA will make its best efforts to expedite review and approval of the application. The completeness and quality of the application, however, will facilitate an expedited review provided we do not encounter any emergencies at other sites.

Please call me if you have any questions concerning this message.

I thank you for your courtesies and wish you a happy and safe Holiday Season.

Sincerely,

Carmen D. Santos, Project Manager
RCRA Corrective Action Office
Waste Management Division
USEPA Region 9
415.972.3360
fax: 415.947.3533

-----Forwarded by Carmen Santos/R9/USEPA/US on 12/18/2009 10:50AM -----

To: "Goloubow, Ron" <Ron.Goloubow@lfr.com>
From: Carmen Santos/R9/USEPA/US
Date: 12/14/2009 10:38AM
cc: "Gibbs, Alan" <Alan.Gibbs@lfr.com>, "Goldberg Day, Amy" <Amy.GoldbergDay@lfr.com>, Charles Robitaille <charles@pacificcharter.org>, Mike Barr <Mike.Barr@aspirepublicschools.org>, Annie Bauer <Annie.Bauer@aspirepublicschools.org>, Patrick Wilson/R9/USEPA/US@EPA
Subject: Re: FW: PCBs - Aspire Site, Follow Up to December 10, 2009 Conference Call

Dear Ron Goloubow:

This message reiterates our request for the information that we asked in the December 11, 2009 message (sent to you at 12:02 PM). The use and application of the Agency's Pro-UCL statistical package to support data analysis is consistent with current Agency risk assessment guidance. The use of the Pro-UCL package however, does not mitigate Aspire's responsibility to provide the additional risk assessment supporting information that was contained in my previous message to you. That is, a comprehensive and site-wide conceptual site model (CSM), and the supporting risk assessment exposure and risk characterization equations - in addition to the equation inputs - will be necessary for EPA to complete a timely review.

In addition, samples with contaminant concentrations less than the laboratory detection or reporting limit(s) should be managed consistent with the guidelines found in the Pro-UCL support guidance. That is, the statistical package will conduct an evaluation of the entire data set to determine its statistical distribution. A distribution-specific upper confidence limit on the mean (UCLm) will then be reported and should then be used as the exposure point concentration (EPC) in support of risk characterization. Pro-UCL will use boot-strap and other statistical methods to approximate the most appropriate concentration value to be substituted for those samples with PCB concentrations less than the laboratory reporting or detection limit. Therefore, the substitution of non-detect sample results with the reporting limit is not the recommended approach.

We look forward to receiving the requested information.

Thank you for your courtesies.

Sincerely,

Carmen D. Santos, Project Manager
RCRA Corrective Action Office
Waste Management Division
USEPA Region 9
415.972.3360
fax: 415.947.3533

"Goloubow, Ron" ---12/11/2009 02:28:17 PM---Per our conversation yesterday, LFR is in the process of applying the 95% upper confidence level sta

From: "Goloubow, Ron" <Ron.Goloubow@lfr.com>

To: Carmen Santos/R9/USEPA/US@EPA, Patrick Wilson/R9/USEPA/US@EPA, "Khatri, Paresh, Env. Health" <paresh.khatri@acgov.org>, Mark Malinowski <MMalinow@dtsc.ca.gov>

Cc: "Gibbs, Alan" <Alan.Gibbs@lfr.com>, "Goldberg Day, Amy" <Amy.GoldbergDay@lfr.com>, Charles Robitaille <charles@pacificcharter.org>, Mike Barr <Mike.Barr@aspirepublicschools.org>, Annie Bauer <Annie.Bauer@aspirepublicschools.org>

Date: 12/11/2009 02:28 PM

Subject: FW: PCBs - Aspire Site, Follow Up to December 10, 2009 Conference Call

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Per our conversation yesterday, LFR is in the process of applying the 95% upper confidence level statistical analysis (95-UCL) to the analytical data for the soil samples that contain PCBs greater than 0.13 mg/kg and less than 0.39 mg/kg that would remain in soil at the Site. For samples that have less than the laboratory reporting limit we are planning to use the laboratory reporting limit as a concentration of PCBs that are left in place at that particular location. The US EPA statistical software ProUCL will be used to calculate the 95% UCL.

If this analysis determines that the 95-UCL is ≤0.13 mg/kg for soil across the Site would this analysis provide the data required to deem the removal action as successful?

Please let me know.

Ron Goloubow, P.G.
LFR Inc., an ARCADIS Company
510-596-9550 Direct Dial
510-501-1789 Cell
510-652-4906 Facsimile
ron.goloubow@lfr.com

From: Santos.Carmen@epamail.epa.gov [mailto:Santos.Carmen@epamail.epa.gov]
Sent: Friday, December 11, 2009 12:02 PM
To: Goloubow, Ron; Gibbs, Alan
Cc: Annie Bauer; Mike Barr; Mark Malinowski; Khatri, Paresh, Env. Health; Charles Robitaille; Wilson.Patrick@epamail.epa.gov

Subject: PCBs - Aspire Site, Follow Up to December 10, 2009 Conference Call

Dear Ron Goloubow and Alan Gibbs:

I am following up on the issue of Aspire continuing with the conditionally-approved PCB self-implementing cleanup notification rather than submitting a PCB risk-based disposal approval. Our November 13, 2009 conditional approval letter establishes a cleanup goal for PCBs of 0.13 mg/kg (total Aroclors) for the Aspire school site in Oakland - a level consistent with the cleanup goal proposed in your corrective action plan and a concentration previously approved by the Alameda County Department of Health (ACDH).

I want to clarify that if Aspire decides to propose a different cleanup level, that Aspire may make such proposal via an amendment to the current self-implementing cleanup notification as long as: (1) all exposure assessment and risk characterization calculations and inputs, a site-wide conceptual site model (CSM), and all supporting justifications are submitted to USEPA for review and approval, (2) the proposed PCB risk-based cleanup level does not increase the site-wide cumulative risk or hazard of applicable contaminants at the site beyond a risk range acceptable to ACDH, DTSC School Program, and USEPA, and (3) ACDH, DTSC's School Program, and USEPA agree that the proposed cleanup level is adequate and protective.

Please call me if you have any questions concerning this follow up message.

Thank you for your courtesies and have a nice day.

Sincerely,

Carmen D. Santos, Project Manager
RCRA Corrective Action Office
Waste Management Division
USEPA Region 9
415.972.3360
fax: 415.947.3533

Trestler, Lauren

From: Goloubow, Ron
Sent: Thursday, March 04, 2010 4:05 PM
To: 'Santos.Carmen@epamail.epa.gov'; Rollins.Christopher@epamail.epa.gov
Subject: Aspire Oakland, CA - Manifests
Attachments: aspire wm manifests_001.pdf; aspire wm manifests_029.pdf

Carmen the attached manifests are for the 968.81 tons of PCB-affected soil that was excavated, and transported from the subject Site to Waste Management's Kettleman Hills Landfill. I will send hard copies via regular mail.

Thanks Ron.

Ron Goloubow, PG | Senior Associate Geologist | **ron.goloubow@arcadis-us.com**

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From: Santos.Carmen@epamail.epa.gov [mailto:Santos.Carmen@epamail.epa.gov]
Sent: Monday, February 22, 2010 12:27 PM
To: Goloubow, Ron
Cc: Rollins.Christopher@epamail.epa.gov
Subject: PCBs: Aspire Site in Oakland (1009 66th Avenue)

Greetings, Ron:

This message is concerning the application dated January 14, 2010.

I want to provide a clarification on the issue of disposal of PCB remediation waste, since we have cited the regulations for disposal in several previous occasions. This message also request specific information concerning off-site disposal of PCB remediation waste.

In reviewing the application, it seems that LFR-ARCADIS / Aspire believe that soils contaminated with PCBs at concentrations greater than 1 mg/kg and lower than 50 mg/kg are not regulated under TSCA. The Aspire application states that: *"In addition, soil will be transported for off-site disposal as a non-TSCA waste (PCB concentrations greater than 1 mg/kg but less than 50 mg/kg)."*

Contaminated soils are bulk PCB remediation wastes and regulated for disposal under TSCA regardless the TSCA cleanup is being conducted under the self- implementing (40 CFR 761.61(a)) or risk-based disposal approval (40 CFR 761.61(c)) sections of the TSCA regulations. See 40 CFR 761.61(a)(5)(i)(B), (B)(1), (B)(2)(ii) and 40 CFR 761.61(a)(5)(v)(a) concerning off-site disposal of bulk PCB remediation waste with a PCB concentration below 50 mg/kg.

Within 30 days after the date of this message please submit copies of the documents related to the transportation and off-site disposal of bulk PCB remediation wastes (containing PCBs at less than 50 mg/kg) demonstrating such waste was properly identified as TSCA regulated and disposed off-site in accordance with the regulations cited above. In addition, the in-situ soil PCB concentration should have been used to determine the PCB concentration for off-site disposal and not the PCB concentration of soils after excavation and staged in a pile.

If you have any questions concerning this message, please call me at 415.972.3360.

I thank you for your courtesies.

Sincerely,

Carmen D. Santos, Project Manager

RCRA Corrective Action Office
Waste Management Division
USEPA Region 9
415.972.3360
fax: 415.947.3533

Trestler, Lauren

From: Goloubow, Ron
Sent: Monday, June 28, 2010 7:46 PM
To: 'Santos.Carmen@epamail.epa.gov'
Subject: Aspire School Site in Oakland, California - Conditional Approval of SAP and LFR's November 18, 2009 Letter
Attachments: Table_1-AirResults-09155.pdf

Carmen as requested I have provided a summary of how the following conditions provided in your email below were addressed at the Subject Site. The responses are in green. Please let me know if this is what you were looking for. If so I will put it on ARCADIS letterhead to make it more formal…

Ron.

Ron Goloubow, PG | Senior Associate Geologist | **ron.goloubow@arcadis-us.com**

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From: Santos.Carmen@epamail.epa.gov [mailto:Santos.Carmen@epamail.epa.gov]
Sent: Wednesday, November 25, 2009 10:30 AM
To: Goloubow, Ron
Cc: wilson.patrick@epa.gov; santos.carmen@epa.gov
Subject: PCBs: Aspire School Site in Oakland, California - Conditional Approval of SAP and LFR's November 18, 2009 Letter
Importance: High

Dear Ron Goloubow:

Thank you for submitting the November 18, 2009 letter concerning USEPA's November 13, 2009 conditions of approval for the *"Toxic Substances Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California"* (prepared by LFR Inc. for Aspire and dated October 23, 2009) and the *"Sampling and Analysis Plan (SAP) For the Former Pacific Electric Motors Facility 1009 66th Avenue, Oakland, California November 2009, Prepared under notification requirements of 40 CFR 761.61(a)(3)."* We have reviewed both documents, which are attached below. This message addresses clarifications on these documents and USEPA's conditional approval of LFR's Soil Sampling Plan.

A. LFR Inc. November 18, 2009 Letter

Ambient air monitoring for PCB Aroclors in dust at the perimeter of the site. I will consult next week with my colleagues on the perimeter air sampling that LFR has proposed to meet Condition 6 of USEPA's November 13, 2009 approval letter and will get back to LFR on this issue during the week of November 30, 2009. In the meantime, I have some comments regarding the NIOSH method proposed in LFR's November 18, 2009 letter. The NIOSH Method 5503 states that precision of the method has not been evaluated, accuracy of the method has not been determined, range not studied, and for bias, the method indicates that none has been identified. Perhaps other analytical methods could be considered to meet the purpose of Condition 6. In a separate message I am asking some clarifications on the miniRam.

Air monitoring consisting of dust monitoring and the collection and analysis of air samples was conducted in accordance with the procedures provided in the CAP and the letter from LFR to USEPA dated November 18, 2009. Analytical result of the air samples did not contain pcbs above the laboratory reporting limits in any of the air samples collected at the Site. The draft table summarizing the results of the air monitoring is attached.

Building Materials Sampling Plan. Decontamination of sampling equipment and tools must be in accordance with 40 CFR 761.79(c)(2) as required in approval Condition 3 of USEPA's November 13, 2009 approval letter. The portions of the tools that came in contact with the building materials (trowel, drill bit, and screwdriver) were swabbed with a towels containing hexane. The decontamination materials were disposed of along with the PCB affected soil that was transported to Waste Management's Kettleman Hills Landfill.

Deed Notice. As required in approval Condition 9 of USEPA's November 13, 2009 approval letter, the owner of the property is to submit a written, signed certification to USEPA certifying the required deed notice was recorded in accordance with state law. We have not yet started on this.

Certification required under 40 CFR 761.61(a)(3)(i)(E). The revised written, signed certification meets the requirements of USEPA's conditional approval letter. Okay

B. LFR's November 2009 Soil Sampling Plan - Conditional Approval

The following are the conditions of approval for *"Sampling and Analysis Plan (SAP) For the Former Pacific Electric Motors Facility 1009 66th Avenue, Oakland, California November 2009, Prepared under notification requirements of 40 CFR 761.61(a)(3)."*

1. SAP, Soil cleanup verification sampling. Verification of soil cleanup must be conducted in accordance with 40 CFR 761.61(a)(6) and 40 CFR 761, Subpart O. Refer to the requirements in these regulations. If verification sampling shows that soils are still above the 0.13 cleanup level, soils must be excavated until the cleanup level is achieved as demonstrated through cleanup verification sampling (see 40 CFR 761.61(a)(6)). Soil samples were collected from excavations of PCB-affected soil in accordance with the SAP which required sidewall samples collected approximately every 25 linear feet and bottom samples collected approximately every 400 square feet.

2. SAP, Sections 1.1 (Summary information), 1.3 (Target Excavation Levels), 2.2 (Excavation Confirmation Soil Sampling Procedure). As acknowledged in LFR's November 18, 2009 letter, the soil cleanup level for the self implementing cleanup of PCBs at the Aspire site in Oakland is 0.13 mg/kg (ppm) and not 0.39 mg/kg. The soil cleanup level in the LFR Sampling Plan is revised accordingly to reflect the soil cleanup level specified in USEPA's November 13, 2009 conditional approval letter.

3. SAP, Section 2.2 (Excavation Confirmation Soil Sampling Procedure). This section states:

> "Collect soil samples from the bottom of the excavation on an approximate 30 foot by 30 foot grid, at least one bottom sample will be collected from each excavation." and
>
> "Confirmation soil samples from either the floor or sidewalls that contain 0.39 mg/kg PCB or less shall be a confirmation that high-level PCB soils have been removed. Confirmation soil samples that contain greater than 0.39 mg/kg PCB shall be an indication that the specific grid needs further excavation in order to remove the PCB affected soil from the affected area."

The soil cleanup level referred to in the above cited paragraphs from Section 2.2 of the SAP is changed herein to 0.13 mg/kg (ppm), consistent with USEPA's November 13, 2009 approval letter. Please refer to Item B.1 ("SAP, Soil cleanup verification sampling") above. Done

4. LFR's November 23, 2009 electronic mail message. As agreed on November 23, 2009, LFR will collect six additional soil cleanup verification samples for PCB analysis only from the locations depicted in "blue highlighter" in the attached LFR map. These six soil cleanup verification samples are incorporated herein by reference into LFR's November 2009 SAP and such SAP is the subject of this conditional approval. LFR will also analyze for PCBs soil cleanup confirmation samples that will be collected around the perimeter of the polygon outlined in red and shown in the attached LFR map. LFR is collecting soil samples every 25 feet along the perimeter of this red-outlined polygon area. These samples are Such samples will also be analyzed with other constituents of concern identified at the site. These soil cleanup verification samples are incorporated herein by reference into LFR's November 2009 SAP and such SAP is the subject of this conditional approval. Although not discussed with LFR on November 23, 2009, PCB excavation

areas (e.g., PCB Excavation Area 2) outside of the red-outlined "polygon area" should also be reviewed in similar manner as PCB Excavation Area 3 and the polygon area to determine if additional soil cleanup verification samples are necessary in light of the 0.13 mg/kg cleanup level for PCBs. The detection limit for areas showing that PCBs were not detected should be reviewed to ensure the PCB detection limit used in the sample analysis is below the PCB cleanup level. Done.

5. "Additional Soil Sampling" and "Rationale for Additional Soil Sampling" sections in LFR's October 23, 2009 Self Implementing Cleanup Plan. These sections of the self implementing cleanup plan include additional soil characterization samples to be collected in certain areas (e.g., steam sump, beneath and around sewer lines, beneath and around the compressor area) at the Aspire site. These sections of the cleanup plan are incorporated herein by reference into LFR's November 2009 SAP and such SAP is the subject of this conditional approval. Depending on the sampling and analysis results, soil cleanup and cleanup verification may be necessary. Soil sampling must be conducted in accordance with 40 CFR 761, Subpart N. If necessary, based on site characterization sampling and analysis data for the areas described in the cited sections of the LFR October 2009 cleanup plan, soil cleanup and cleanup verification sampling may need to be conducted. Soil cleanup and cleanup verification sampling must be conducted in accordance with 40 CFR 761, Subpart O and 40 CFR 761.61(a)(6). The soil cleanup level for PCBs at the Aspire school site is 0.13 mg/kg. Done

6. SAP, Section 2.4 (Sampling Equipment Decontamination). Decontamination of sampling equipment, movable equipment, and tools must be done in accordance with 40 CFR 761.79(c)(2) as required in Condition 3 of USEPA's November 13, 2009. The buckets of the movable equipment was swabbed with a towels containing hexane. The decontamination materials were disposed of along with the PCB affected soil that was transported to Waste Management's Kettleman Hills Landfill.

7. SAP, Section 2.4.2 (Management of Investigation Derived Wastes. LFR must follow the requirements in Condition 5 of USEPA's November 13, 2009 approval letter for offsite disposal of all wastes containing PCBs, including among others, soils exceeding the PCB cleanup level of 0.13 mg/kg. Soil excavated from areas of the Site where soil samples contained PCBs at concentrations greater than 50 mg/kg was transported to Waste Management's Kettleman Hills Landfill as "Bulk PCB Remediation Waste". Soil excavated from areas of the Site where soil samples contained PCBs at concentrations less than 50 mg/kg was transported as "Bulk PCB Remediation Waste" to Republic Services Vaso Road Landfill. The building demolition debris including the concrete slab was also transported as Bulk PCB Remediation Waste to Republic Services Keller Canyon Landfill located in Pittsburg, CA.

Please let me know if you have any questions concerning the matters addressed in this message.

Sincerely,

Carmen D. Santos, Project Manager
RCRA Corrective Action Office
Waste Management Division
USEPA Region 9
415.972.3360
fax: 415.947.3533

Trestler, Lauren

From: Goloubow, Ron
Sent: Friday, August 13, 2010 5:15 PM
To: 'Santos.Carmen@epamail.epa.gov'; Khatri, Paresh, Env. Health; Wilson.Patrick@epamail.epa.gov
Cc: Charles Robitaille; Mike Barr; 'Steph Wilson'; Gibbs, Alan; Goldberg Day, Amy; Henricksen, Dolores; Goloubow, Ron
Subject: Aspire Oakland - TSCA Self-Implementing Report

Dear all - the report documenting the Implementation of the Toxic Substances Control Act Self-Implementing Cleanup Notification at the Former Pacific Electric Motors Facility, 1009 66th Avenue Oakland, California has been prepared. Since the file is 13MB it has been uploaded on to an ARCADIS FTP site. The instructions to access the file on the ARCADIS FTP site are provided below. The file has also been uploaded to the Alameda County FTP site. A hard copy of the report is being sent to Carmen Santos via U.S. Mail. If anyone else would like a "hard copy" please let me know.

Thanks
Ron.

Please use Internet Explorer to go to http://filetransfer.arcadis-us.com/thinclient/and log in with the following credentials:

Username: arcadisftp

Password: Tr4nsf3R

Then click "***From ARCADIS***" and look for the folder named: ***Aspire Oakland TSCA Report***

This document will be available for 30 days. If you have any trouble, please let me know.

Ron Goloubow, PG | Senior Associate Geologist | **ron.goloubow@arcadis-us.com**

ARCADIS U.S., Inc. | 1900 Powell Street, Suite 1200 | Emeryville, CA 94608
T. 510.596.9550 | M. 510.501-1789 | F. 510.652.2246
www.arcadis-us.com

Trestler, Lauren

From: Goloubow, Ron
Sent: Friday, September 03, 2010 6:45 PM
To: 'Santos.Carmen@epamail.epa.gov'; Wilson.Patrick@epamail.epa.gov
Cc: 'Charles Robitaille'; Gibbs, Alan; Goloubow, Ron
Subject: FW: Aspire - EPA TSCA Document Review
Attachments: FIG6 PCBs in soil wCutFill.pdf; FIG7 July 2010 CUT FILL (1).pdf

Carmen - attached are the requested figures for the Aspire project that are to replace existing figures 6 and 7 that were included in the report that was transmitted to you on August 13, 2010. As requested these figures illustrate the areas of the site that will be "cut" and "filled" as part to the redevelopment – construction project. The figures also provide the analytical results for soil samples that are considered "in-place" after the removal action for PCB-affected soil was completed. You will see the email below from Charles Robitaille regarding the review schedule for this TSCA Report.

Lets discuss this project again on Tuesday, September 7th at 11:00 AM, if you are available.

Have a good weekend.

Ron.

Ron Goloubow, PG | Senior Associate Geologist | **ron.goloubow@arcadis-us.com**

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From: Charles Robitaille [mailto:charles@pacificcharter.org]
Sent: Friday, September 03, 2010 2:22 PM
To: Goloubow, Ron
Cc: Gibbs, Alan
Subject: RE: Aspire - EPA TSCA Review

Ron,

We're really running out of time since there is a grading moratorium in Oakland commencing 10/15-4/15 (6 months). September 17 is too late. I need to be pushing significant dirt around by the third week of September and I have to allow for mobilization of by contractor and other "stuff". I need her comments ASAP.

Charles P. Robitaille
Senior Project Manager
Pacific Charter School Development
2350 El Camino Avenue
Sacramento, California 95821-5689
925-698-1118 - Cell

916-941-2477 - Facsimile
charles@pacificcharter.org
www.pacificcharter.org

Trestler, Lauren

From: Goloubow, Ron
Sent: Wednesday, September 15, 2010 7:00 PM
To: 'Santos.Carmen@epamail.epa.gov'; Wilson.Patrick@epamail.epa.gov; Khatri, Paresh, Env. Health
Cc: Charles Robitaille; Gibbs, Alan; Goldberg Day, Amy; Goloubow, Ron
Subject: Aspire Oakland - TSCA Encapsulation-Sep10-EM009155
Attachments: let-TSCA Encapsulation-Sep10-EM009155.pdf

The attached letter provides the scope of work that we discussed last week with respect to excavating and encapsulating some surficial soil that was identified as containing PCBs at concentrations greater than the 0.130 mg/kg clean-up goal for the project. Please contact me at your earliest convenience if you have any questions or need any more information.

Ron.

Trestler, Lauren

From: Goloubow, Ron
Sent: Friday, June 24, 2011 9:45 PM
To: Santos.Carmen@epamail.epa.gov
Cc: brad.kettelle@blackwellconstruction.com; hjones@icsinc.tv; michael@pacificcharter.org
Subject: RE: Aspire School Oakland - Sample Plan for Imported - Landscaped Soil
Attachments: let-Sample Plan Import Soil June 2011-EM009155.pdf

This version of the sampling plan includes the collection and analysis of ONE duplicate soil sample as requested by EPA...

Ron Goloubow, PG | Principal Geologist | **ron.goloubow@arcadis-us.com**

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From: Santos.Carmen@epamail.epa.gov [mailto:Santos.Carmen@epamail.epa.gov]
Sent: Friday, June 24, 2011 6:31 PM
To: Goloubow, Ron
Cc: brad.kettelle@blackwellconstruction.com; hjones@icsinc.tv; michael@pacificcharter.org
Subject: Re: Aspire School Oakland - Sample Plan for Imported - Landscaped Soil

Hello Ron:

Thank you for your sending me the sampling plan for the imported soils. In response to your previous message concerning the duplicate samples, one duplicate samples should be collected. I believe that our criteria for duplicate samples is either 1 duplicate for every 1 to 10 or 1 to 20 samples that are collected.

I will review the plan that you just sent me and will get back to you early next week.

Thank you for your courtesies and have a great evening.

Sincerely,
Carmen

Carmen D. Santos, PCB Coordinator
RCRA Corrective Action Office
Waste Management Division
USEPA Region 9
415.972.3360
santos.carmen@epa.gov
"Failure is simply the opportunity
to begin again, this time more
intelligently." Henry Ford

-----"Goloubow, Ron" <Ron.Goloubow@arcadis-us.com> wrote: -----

> To: Carmen Santos/R9/USEPA/US@EPA
> From: "Goloubow, Ron" <Ron.Goloubow@arcadis-us.com>
> Date: 06/24/2011 05:51PM
> Cc: "michael@pacificcharter.org" <michael@pacificcharter.org>, 'Brad Kettelle' <brad.kettelle@blackwellconstruction.com>, Howard Jones <hjones@icsinc.tv>
> Subject: Aspire School Oakland - Sample Plan for Imported - Landscaped Soil
> *(See attached file: let-Sample Plan Import Soil June 2011-EM009155.pdf)*

Carmen – as requested the sampling plan for soil to be imported to the site for use in the landscaped areas is attached. This version of the sampling plan takes into account your comments transmitted on June 22, 2011. We will provide the analytical results for the samples as they become available. Currently, the sampling is NOT scheduled. Please contact me should you have any questions or need any more information.

Ron.

Trestler, Lauren

From: Goloubow, Ron
Sent: Friday, March 16, 2012 5:06 PM
To: Santos.Carmen@epamail.epa.gov
Subject: RE: PCBs: Aspire School Site, 66th Avenue, Oakland, California - Request for a Revised PCB Cleanup Completion Report

Hi Carmen - just to be clear…

ARCADIS is preparing a **SEPARATE-ADDENDUM** to the report entitled "Implementation of the Toxic Substances Control Act Self-Implementing Cleanup Notification at the Former Pacific Electric Motors Facility, 1009 66th Avenue, Oakland, California" dated August 12, 2011 (the "Implementation Report"). The **SEPARATE-ADDENDUM** will document the remedial activities that took place at the site AFTER ARCADIS submitted a Implementation Report. The "**SEPARATE-ADDENDUM** will document/include the following:

- **Additional Remedial Actions Conducted at the Site after the Submittal of the Implementation Report (encapsulation of soil that needed to be excavated for the redevelopment project)**
- **Revised Health Risk Screening Calculations (to include confirmation soil samples collected from the areas that needed to be excavated for the redevelopment project) and the requests from Dr. Wilson.**
- **Mitigation Measures- Revised TSCA Cap**
- **Imported Soil for Landscaped Areas (new soil data for imported soil)**

The Figures requested in the email dated 10-28-2011 will be included.

The waste disposal information (manifests and a summary of the volumes) were included in Appendix B of the Implementation Report. Since no additional soil was removed from the site thus this data – information will NOT be re-issued.

Does EPA want the laboratory lab certificates-reports on a CD or paper copies? Can you confirm that EPA wants laboratory lab certificates-reports for soil samples that failed and passed the clean up criteria?

ARCADIS will include a table that summarizes the volume of soil excavated at each area including where the material disposed.

Will this work? Is this what USEPA was thinking-anticipating?

Please let me know.

Ron Goloubow, PG | Principal Geologist | **ron.goloubow@arcadis-us.com**

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From: Santos.Carmen@epamail.epa.gov [mailto:Santos.Carmen@epamail.epa.gov]
Sent: Friday, October 28, 2011 11:28 AM
To: Goloubow, Ron
Subject: PCBs: Aspire School Site, 66th Avenue, Oakland, California - Request for a Revised PCB Cleanup Completion Report

Hello Ron:

You had sent us a document that was supposed to capture the PCB cleanup at the Aspire site in Oakland. However, after we had reviewed that document additional work including additional PCB cleanup was conducted that is not formally captured in any report. The following data gaps must be reconcile in a revised PCB Cleanup Completion Report.

1. Additional excavations conducted at the site to remove soil contaminated with PCBs above the cleanup level.
2. Consolidation at the Aspire site of certain soils contaminated with PCBs above the cleanup level,
3. All changes made to the cap, such as materials, thickness, and incorporation of landscaping areas,
4. Revised final risk calculations associated with residual PCB concentrations remaining at the site,
5. Figures depicting the areas where cleanup levels were achieved, where the cleanup levels were not achieved, and areas where soils contaminated with PCBs above the cleanup level were consolidated,
6. Figures depicting the final cap and showing construction details (e.g., materials and thickness of each layer) as well as landscape areas,
7. Figures depicting the redevelopment project in its final configuration,
8. Figures depicting survey coordinates for the location of soils beneath the cap containing PCBs above the cleanup level,
9. Waste disposal information (e.g., volumes of soil disposed of and facility to which it was sent for disposal, table summarizing Hazardous Waste Manifest and other waste transportation documentation for wastes containing PCBs at, above, and below 50 mg/kg),
10. Laboratory analytical data for PCB site characterization and cleanup verification samples, and
11. Confirmation of the source of fill used in landscape areas at the site in addition to the laboratory analysis data for such fill material.

I want to clarify in reference to the above data or information gaps that our approval of the PCB cleanup notification requires a PCB Cleanup Completion Report be submitted and the report is to contain information listed in the approval letter as well as the information in 40 CFR 761.61(a)(9). In addition, given the risk-based cleanup level established for the Aspire site, the report is to include any risk calculations associated with residual PCB concentrations remaining at the site. Based on conversations that we had with Dr. Patrick Wilson (EPA R9 Senior Toxicologist) and your toxicologist, the risk calculations may have been revised, however, these are not formally included in any report.

In light of the above, I am asking that a revised PCB Cleanup Report be submitted for our review that incorporates all the information required in EPA's approval letter, 40 CFR 761.61(a)(9), and that is responsive to the information data gaps described in this message.

Please let me know the date by which Aspire/Arcadis can submit the requested report to EPA for review.

Thank you for your courtesies and please call me if you have any questions concerning this message.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
RCRA Corrective Action Office (WST-5)
Waste Management Division
USEPA Region 9
415.972.3360
santos.carmen@epa.gov

"Think left and think right and think low and think high. Oh, the thinks you can think up if only you try!" **Dr. Seuss**

Trestler, Lauren

From: Goloubow, Ron
Sent: Friday, June 22, 2012 7:04 PM
To: Santos.Carmen@epamail.epa.gov
Cc: Hale, Alice
Subject: Aspire Oakland
Attachments: Deed Restriction Aspire Oakland - 66th Ave August 2011.doc

Carmen I received your voice mail today about the Aspire site in Oakland.

The summary report will be sent to you on or before Friday, June 29, 2012.

The text for the draft land use covenant is attached for your review.

You mentioned that a letter is being prepared by the county for this project. What was the subject for that letter?

Thanks for you patience .

Ron.

Ron Goloubow, PG | Principal Geologist | **ron.goloubow@arcadis-us.com**

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Trestler, Lauren

From:	Goloubow, Ron
Sent:	Friday, June 29, 2012 4:24 PM
To:	Santos.Carmen@epamail.epa.gov
Cc:	Kahlmus D. Eatman (kahlmus@pacificcharter.org); Mala Batra (Mala.Batra@aspirepublicschools.org); Hale, Alice
Subject:	Aspire Oakland - DRAFT Addendum - PCB Cleanup Completion Report
Attachments:	Figures 1-7.pdf; Attachment 4 PCB summary.pdf; DRAFT rpt-TSCA Implementation-June 2012-EM009155.doc

The DRAFT addendum to the PCB Cleanup Completion Report for the College for Certain (Aspire) project located at 1009 66th Avenue in Oakland, California is attached.

Specifically the text, figures, and the summary table for the PCB-affected soil (which is a portion of Attachment 4) are included.

The following are being sent to you via regular mail:
Paper copies of the Figures
a CD with the following attachments:
Attachment 1 - Laboratory Analytical Data for Soil Samples
Attachment 2 - Revised Human Health Risk Evaluation
Attachment 3 - Laboratory Analytical Data Report for Imported Soils
Attachment 4 - Waste Disposal Information the attachments, Manifests, laboratory reports

Following the EPA's review of the subject report, we plan on finalizing the report, along with the draft "Operation and Maintenance Plan for Cap Mitigation Measures" and Deed notice for the parcel previously transmitted for review.

Please contact me if you have any questions or need any more information.

Thanks Ron.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Via U.S. Postal Service and Electronic Mail
Certified Mail Receipt No. 7000 0520 0021 6107 8407

November 13, 2009

Aspire Public Schools, a California
non-profit public benefit corporation
1001 22nd Avenue, Suite 100
Oakland, CA 94606
Attention: Mike Barr, CFO

Re: Polychlorinated Biphenys – U.S. EPA Conditional Approval Under 40 C.F.R. § 761.61(a), Toxic Substances Control Act - - *"Toxic Substances Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California"*

Dear Mr. Barr:

We have reviewed the *"Toxic Substances Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California,"* letter dated October 23, 2009 and prepared by LFR Inc. an Arcadis Company (LFR) for Aspire Public Schools ("Aspire"). The U.S. Environmental Protection Agency Region 9 (USEPA) is approving Aspire's October 23, 2009 Notification with the conditions established in the attached *"USEPA Conditional Approval for Aspire Public Schools, 1009 66th Avenue, Oakland, CA PCB Self-Implementing On-Site Cleanup and Disposal of PCB Remediation Waste."*

The LFR letter is intended to serve as the notification and certification ("Notification") required in 40 C.F.R. § 761.61(a) of the Toxic Substances Control Act (TSCA) for a self-implementing on-site cleanup and disposal of polychlorinated biphenyls (PCBs) at the Aspire property at 1009 66th Avenue in Oakland. PCBs are present at the Aspire property ("Aspire site") in soils and a potential exists for PCB-containing manufactured products to be present in structures to be demolished at the site. Aspire plans to redevelop the site as a public school for sixth to 12th grade students.

In addition, the Notification requests a "variance" to the schedule provided in 40 C.F.R. § 761.61(a)(3)(ii). USEPA is granting the requested waiver for the schedule in 40 C.F.R. § 761.61(a)(3)(i) in accordance with 40 C.F.R. § 761.61(a)(3)(iii) and in consideration of financial matters that Aspire claims if not resolved could prevent or further delay construction of the school. However, the owner of the property still needs to obtain a similar written waiver from the California Department of Toxic Substances Control (DTSC) and Alameda County Environmental Health (ACEH) in accordance with 40 C.F.R. § 761.61(a)(3)(iii) and maintain all waivers and other records in accordance with 40 C.F.R. § 761.61(a)(9).

While we recognize that, at an October 27, 2009 meeting with Charles Robitaille (Aspire Charter Schools) and LFR representatives (Aspire consultants), Aspire had sought a cleanup standard of 0.39 mg / kg (ppm), we have decided to approve a cleanup standard of 0.13 ppm, as specified in Condition 7 of

the attached approval. This cleanup level is consistent with the levels approved by both ACEH and DTSC as being protective of human health, in that it meets the cleanup goal for PCBs in soils corresponding to a 1 x 10^{-6} risk level. This level is also consistent with the TSCA regulations in 40 C.F.R. § 761.61(a)(4)(v) and 761.61(a)(4)(vi).

We look forward to be of assistance to Aspire during implementation of the subject Notification as modified by the attached USEPA approval. Please call Carmen Santos at (415) 972-3360 if you have any questions concerning this approval.

Sincerely,

Arlene Kabei
Associate Director
Waste Management Division

Enclosure

Cc: Mark Malinowski, DTSC (Chief Schools Unit, Sacramento Office)
Tom Booze, DTSC
Paresh Khatri, Alameda County Environmental Health
Charles Robitaille, Aspire Charter Schools
Alan Gibbs, LFR Inc. an Arcadis Company
Ron Goloubow, LFR Inc. an Arcadis Company
Steve Armann, USEPA R9
Patrick Wilson, USEPA R9
Katherine Baylor, USEPA R9
Carmen Santos, USEPA R9

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

November 13, 2009

USEPA Conditional Approval for Aspire Public Schools, 1009 66th Avenue, Oakland, CA PCB Self-Implementing On-Site Cleanup and Disposal of PCB Remediation Waste

"Toxic Substances Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California," letter dated October 23, 2009 and prepared by LFR an Arcadis Company (LFR) for Aspire Public Schools ("Aspire").

The U.S. Environmental Protection Agency Region 9 (USEPA) is approving with conditions the Aspire October 23, 2009 Notification and Certification ("Notification"). The Notification is required by 40 C.F.R. § 761.61(a) of the Toxic Substances Control Act (TSCA) for a self-implementing on-site cleanup and disposal of polychlorinated biphenyls (PCBs), 40 C.F.R. § 761.61(a), at the Aspire property at 1009 66th Avenue in Oakland. Aspire must implement the terms of the Notification, as modified by the conditions of approval.

This conditional approval does not relieve the owner of the property from complying with all other applicable federal, state, and local regulations and permits. Departure from the approval conditions without prior written permission from USEPA may result in the commencement of proceedings to revoke this approval, and/or an enforcement action. Nothing in this approval bars USEPA from imposing penalties for violations of this approval or for violations caused by other activities not covered under the terms of this approval that trigger TSCA PCB requirements.

USEPA Conditions of Approval

1. Written, signed certification by owner of Aspire property and party conducting cleanup. The Notification includes an incomplete, unsigned certification. Within two (2) days after the date of this approval, Aspire must submit a revised written, signed Certification including the language under *"Certification"* in 40 C.F.R. § 761.3 and in 40 C.F.R. § 761.61(a)(3)(i)(E). Both the owner of the Aspire property and the party conducting the cleanup must sign the Certification.

2. Pre-demolition survey. As discussed with Aspire on October 27, 2009, Aspire shall conduct a survey and sampling of building materials in structures currently at the site to determine if PCBs are present. We understand that structures at the site were built in 1946. Considering the production period of PCB-containing materials, it is likely that building materials in structures at the site may contain PCBs. Also see Condition 3 below. In addition, the compressor, underground pipelines, and transformer present at the site shall be tested for PCBs.

3. Sampling and analysis plan. This sampling plan is to address pre-demolition and pre-cleanup sampling activities as well as post-demolition sampling and PCB cleanup verification sampling. Within two (2) days after the date of this approval, Aspire must submit for USEPA approval a sampling and analysis plan (SAP) describing data quality objectives, sampling procedures, quality assurance / quality

control procedures for sample collection, number of samples to be collected, sample preservation, and chain-of-custody for sample delivery to the analytical laboratory. The SAP must identify the analytical laboratory performing analysis of the samples. In addition, the SAP must include decontamination procedures for movable equipment, tools, and sampling equipment in accordance with 40 C.F.R. § 761.79(c)(2). Aspire must obtain USEPA's written approval of the SAP before beginning sampling activities.

The SAP must include the procedures that Aspire will use to characterize building materials for PCBs in structures currently present at the site and planned for demolition before beginning school construction. Aspire shall follow the requirements in 40 C.F.R. Part 761, Subpart R ("Sampling Non-liquid, Non-Metal PCB Bulk Product Waste for Purposes of Characterization for PCB Disposal in Accordance with 40 C.F.R. § 761.62, and Sampling PCB Remediation Waste Destined for Off-Site Disposal, in Accordance with 40 C.F.R. § 761.61") for sampling of building materials to determine their PCB concentration for disposal.

4. Sequence of pre-cleanup PCB soil characterization; pre-demolition sampling (building materials); soil remediation; and soil cleanup verification. We understand that except for certain areas in the northwestern portion of the site, most of the site is paved. Current paving materials will be removed and all above ground structures demolished. The site will be completely bare prior to construction of the school. Within five (5) days after the date of this approval, Aspire shall propose the sequence that Aspire will follow for pre-cleanup PCB soil characterization, pre-demolition sampling, soil remediation, and soil cleanup verification to prevent recontamination of soils with PCBs if building materials in existing structures and underground structures (e.g., piping) contain PCBs.

5. PCB remediation waste; PCB bulk product waste; cleanup wastes; and disposal requirements. PCB remediation wastes and PCB bulk product wastes may be generated at the Aspire site during the PCB cleanup and demolition of structures (e.g., corrugated metal buildings) at the site. As the generator of such waste, Aspire must meet all applicable regulatory requirements for storage and offsite disposal in 40 C.F.R. § 761.61(a)(5) (Site Cleanup) and 761.62 (Disposal of PCB Bulk Product Waste). It is also acceptable to dispose of PCB remediation waste in accordance with 40 C.F.R. §§ 761.60 and 761.70. PCBs are a hazardous waste in California. Aspire must ensure that off-site disposal of PCB wastes also meet all applicable and relevant state and local regulatory requirements. Within five (5) days after the date of this approval, provide to USEPA the EPA identification number which confirms that Aspire has an USEPA identification number to manage the PCB wastes.

- *Bulk PCB remediation wastes (e.g., PCB-contaminated soil, PCB-contaminated concrete).* Disposal requirements for bulk PCB remediation waste with PCB concentration less than 50 ppm and equal to or above 50 ppm are contained in 40 C.F.R. §§ 761.61(a)(5)(i)(B)(2)(ii) and 761.61(a)(5)(i)(B)(2)(iii), respectively. Further, the generator must provide written notice to the disposal site of the wastes being shipped for disposal in accordance with 40 C.F.R. § 761.61(a)(5)(i)(B)(2)(iv).

- *Non-porous (e.g., metal) surfaces.* Non-porous surfaces contaminated with PCBs due to spills of liquid PCBs or the migration of PCBs from a manufactured product applied to these surfaces are bulk PCB remediation wastes. Dispose of these wastes offsite in accordance with 40 C.F.R. § 761.61(a)(5)(ii)(B).

- *Porous (e.g., concrete, metal coated with a porous surface) surfaces.* Porous surfaces contaminated with PCBs due to spills of liquid PCBs or the migration of PCBs from a product applied to these surfaces are bulk PCB remediation wastes. Dispose of these wastes offsite in accordance with 40 C.F.R. § 761.61(a)(5)(i).

- *Liquids (e.g., water).* Water contaminated with PCBs at the site (e.g., water generated during excavation of soils due to shallow ground water conditions) must be disposed offsite in accordance with 40 C.F.R. § 761.61(a)(5)(iv) if the PCB concentration in the water is above the applicable standard in 40 C.F.R. § 761.79(b)(1).

- *PCB bulk product waste.* This waste is defined in 40 C.F.R. § 761.3 and disposal requirements are in 40 C.F.R. § 761.62. This waste category includes materials manufactured with PCBs where the PCB concentration in these materials at the time of designation for disposal is ≥50 ppm.

- *Cleanup wastes (e.g., non-liquid cleanup materials, personal protective equipment).* Dispose of these wastes in accordance with 40 C.F.R. § 761.61(a)(5)(v).

6. Measures to prevent exposure of neighboring community to airborne particulates. In the "Air Monitoring" section of the Notification, Aspire proposes to conduct real-time airborne monitoring for particulates during activities likely to generate dust such as excavation of contaminated soils. This monitoring is proposed in the context of worker health and safety. However, such monitoring shall be expanded to include airborne particulate monitoring to determine if the neighboring community is being exposed to air particulates from the site during dust generating activities including building demolition. Within five (5) days after the date of this approval, submit for review the measures that Aspire will implement (including air monitoring) to prevent exposure of neighboring communities to airborne particulates.

In addition, Aspire shall notify neighboring communities of the soil excavation and building demolition activities to be conducted at the site before beginning such activities.

7. Cleanup levels. Aspire plans on redeveloping the site into a public school, which is a high occupancy area. In 40 C.F.R. § 761.61(a)(4)(vi), USEPA requires a PCB cleanup level for high occupancy areas of ≤1 mg / kg (ppm) PCBs. In accordance with 40 C.F.R. § 761.61(a)(4)(vi), USEPA has the authority to specify cleanup levels that are more stringent than ≤1 ppm PCBs. USEPA is approving a cleanup level of 0.13 mg / kg (ppm) for PCBs in soils. The DTSC School Program and Alameda County Environmental Health (ACEH) had approved this PCB cleanup level for the Aspire

school site that is the subject of this conditional approval. Refer to the ACEH March 12, 2009 letter to Aspire, which is attached to the cover letter. It is also our understanding that DTSC considers cumulative health risks when addressing school sites with multiple contaminants. The Aspire site has multiple contaminants in soils and ground water.

8. Cap (protective barrier). USEPA requires that a cap be installed at the Aspire proposed school site in accordance with the requirements in 40 C.F.R. § 761.61(a)(7). Please note that Aspire has acquired a property to construct the proposed school that has a long history (1946 – 2008) of industrial activity during which PCB releases occurred at the site. A possibility exists for PCB congeners (i.e., weathered PCB Aroclors that are dioxin-like PCB compounds) to be present at the site due to historic PCB releases. A cap will prevent direct exposure to soils containing these compounds.

In addition, USEPA was not involved with any of the investigations so far conducted at the site prior to Aspire's October 23, 2009 Notification to USEPA. PCB contaminated soils may remain at the site due to potential uncertainties in the characterization and remediation of PCB-contaminated soils at the site; and shallow ground water conditions potentially impacting site characterization and remediation. A potential may also exist for future changes at the school grounds where penetration of barriers (e.g., concrete, asphalt surfaces) preventing exposure to onsite soils may be necessary (e.g., repair of utilities).

9. Risk management plan and deed notice. The regulations in 40 C.F.R. § 761.61(a)(4)(i)(A) do not require further restrictions such as a deed notice when the ≤1 ppm PCB cleanup level for high occupancy is verified as achieved via confirmatory sampling. However, USEPA believes that in addition to Conditions 7 and 8 a risk management plan would be an institutional control protective of children at the future Aspire school.

USEPA is approving the 0.13 ppm PCB soil cleanup level for the Aspire site under the condition that (1) site soils are overlain with asphalt, concrete, and / or other cap (protective barrier) that impedes direct exposure to on-site soils and (2) a deed notice that includes a risk management plan be recorded in accordance with California state law.

Within 30 days after completion of the PCB cleanup, Aspire shall submit for USEPA approval a risk management plan that at a minimum includes:

- A survey of the Aspire property and map clearly depicting all areas where PCBs were encountered and remediated,
- A description of specific activities to be prohibited at the school because of their potential to penetrate protective barriers (e.g., asphalt, concrete) that would expose onsite soils,
- A description of how the teachers, administrators, and staff at the school will be notified of the specific activities which are prohibited at the school because of their potential to penetrate protective barriers (e.g., asphalt, concrete) that would expose onsite soils and
- The conditions under which penetration or alteration of protective barriers is permitted and the contingencies that must be implemented to prevent exposure to onsite soils.

Within 60 days after completing the PCB cleanup at the Aspire site, pursuant to 40 C.F.R. § 761.61(a)(8), Aspire shall record in accordance with California state law, a notation on the deed to the property, or on some other instrument which is normally examined during a title search, that will in perpetuity notify any potential purchaser of the property (1) That the land has been used for PCB remediation waste disposal and specific activities are prohibited as described in the risk management plan described above; (2) Of the existence of the cap (protective barriers) and the requirement to maintain the protective barriers in perpetuity; and (3) The applicable cleanup levels left at the site, under the cap; and (4) the procedure by which USEPA will be notified of penetrations or alterations of the required cap. In addition, Aspire must submit to USEPA a certification signed by the owner certifying the required deed was recorded.

10. Recordkeeping and PCB cleanup report. The owner of the property must keep records of the PCB cleanup including any cleanup conducted prior to the date of this approval that involved the removal of PCBs from the site. All reports currently available that document PCB cleanup at the site are incorporated herein as part of the Aspire October 23, 2009 Notification. In accordance with 40 C.F.R. § 761.61(a)(9), the owner of the property must keep cleanup records as required in 40 C.F.R. § 761.125(c)(5).

Submit for approval a PCB cleanup report within 30 days after completing the PCB cleanup (including removal and disposal of PCB remediation and bulk product waste). The report must contain all supporting sample analysis results documenting achievement of the PCB cleanup level, data summaries, waste disposal, and all the information required in 40 C.F.R. § 761.125(c)(5).

11. Restoration of the site. After achieving the PCB cleanup level, site restoration shall be done consistent with local and California State regulatory requirements as well as in accordance with the requirements in ACEH's March 12, 2009 letter approving the LFR CAP. The PCB soil cleanup level for the Aspire site is 0.13 ppm. The PCB concentration in the backfill material should not exceed this PCB soil cleanup level.

Trestler, Lauren

From: Santos.Carmen@epamail.epa.gov
Sent: Friday, November 13, 2009 5:51 PM
To: Goloubow, Ron; Gibbs, Alan; charles@pacificcharter.org
Cc: Armann.Steve@epa.gov; Wilson.Patrick@epamail.epa.gov
Subject: PCBs: USEPA Conditional Approval of Aspire's Notification - 1009 66th Avenue, Oakland, CA
Attachments: 11_13_2009_Aspire_USEPA_Approval_PDF_BW_1S735.pdf

Greetings, Ron:

Attached is USEPA's letter conditionally approving Aspire's Notification. The original hard copy is being mailed to the property owner and all the recipients of this message.

We received a sampling plan and a revised, signed Certification via Ron Goloubow. This message acknowledges receipt of these documents. The Certification needs to be signed by both the party conducting the cleanup and the owner of the property as required in 40 CFR 761.61(a)(3)(i)(E). The Certification sent by Ron via e-mail message to us only has the owner's signature and it is therefore incomplete. Please resubmit the Certification signed by both the owner (Aspire) and the party conducting the cleanup (LFR Inc.) as required in the cited regulation.

I take this opportunity to answer Ron Goloubow's and Alan Gibbs' question concerning collection of soil cleanup verification samples at the bottom of the excavation areas if ground water enters the excavations. Soil cleanup verification samples must be collected at the bottom of the excavation areas. The laboratory preparation and analysis of these moist soil samples should be conducted in a manner that facilitates analysis of the soils for PCB Aroclors using USEPA Method 8082. Analysis of ground water entering the excavation areas should be conducted without filtering the ground water samples.

Thank you. Please call me if you have any questions concerning the attached conditional approval.

Sincerely,

Carmen D. Santos, Project Manager
RCRA Corrective Action Office
Waste Management Division
USEPA Region 9
415.972.3360
fax: 415.947.3533

Trestler, Lauren

To: Goloubow, Ron
Subject: RE: PCBs: Aspire School Site in Oakland, California - Conditional Approval of SAP and LFR's November 18, 2009 Letter

From: Santos.Carmen@epamail.epa.gov [mailto:Santos.Carmen@epamail.epa.gov]
Sent: Wednesday, November 25, 2009 10:30 AM
To: Goloubow, Ron
Cc: wilson.patrick@epa.gov; santos.carmen@epa.gov
Subject: PCBs: Aspire School Site in Oakland, California - Conditional Approval of SAP and LFR's November 18, 2009 Letter
Importance: High

Dear Ron Goloubow:

Thank you for submitting the November 18, 2009 letter concerning USEPA's November 13, 2009 conditions of approval for the *"Toxic Substances Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California" (*prepared by LFR Inc. for Aspire and dated October 23, 2009) and the *"Sampling and Analysis Plan (SAP) For the Former Pacific Electric Motors Facility 1009 66th Avenue, Oakland, California November 2009, Prepared under notification requirements of 40 CFR 761.61(a)(3)."* We have reviewed both documents, which are attached below. This message addresses clarifications on these documents and USEPA's conditional approval of LFR's Soil Sampling Plan.

A. LFR Inc. November 18, 2009 Letter

Ambient air monitoring for PCB Aroclors in dust at the perimeter of the site. I will consult next week with my colleagues on the perimeter air sampling that LFR has proposed to meet Condition 6 of USEPA's November 13, 2009 approval letter and will get back to LFR on this issue during the week of November 30, 2009. In the meantime, I have some comments regarding the NIOSH method proposed in LFR's November 18, 2009 letter. The NIOSH Method 5503 states that precision of the method has not been evaluated, accuracy of the method has not been determined, range not studied, and for bias, the method indicates that none has been identified. Perhaps other analytical methods could be considered to meet the purpose of Condition 6. In a separate message I am asking some clarifications on the miniRam.

Building Materials Sampling Plan. Decontamination of sampling equipment and tools must be in accordance with 40 CFR 761.79(c)(2) as required in approval Condition 3 of USEPA's November 13, 2009 approval letter.

Deed Notice. As required in approval Condition 9 of USEPA's November 13, 2009 approval letter, the owner of the property is to submit a written, signed certification to USEPA certifying the required deed notice was recorded in accordance with state law.

Certification required under 40 CFR 761.61(a)(3)(i)(E). The revised written, signed certification meets the requirements of USEPA's conditional approval letter.

B. LFR's November 2009 Soil Sampling Plan - Conditional Approval

The following are the conditions of approval for *"Sampling and Analysis Plan (SAP) For the Former Pacific Electric Motors Facility 1009 66th Avenue, Oakland, California November 2009, Prepared under notification requirements of 40 CFR 761.61(a)(3)."*

1. SAP, Soil cleanup verification sampling. Verification of soil cleanup must be conducted in accordance with 40 CFR 761.61(a)(6) and 40 CFR 761, Subpart O. Refer to the requirements in these regulations. If

verification sampling shows that soils are still above the 0.13 cleanup level, soils must be excavated until the cleanup level is achieved as demonstrated through cleanup verification sampling (see 40 CFR 761.61(a)(6)).

2. SAP, Sections 1.1 (Summary information), 1.3 (Target Excavation Levels), 2.2 (Excavation Confirmation Soil Sampling Procedure). As acknowledged in LFR's November 18, 2009 letter, the soil cleanup level for the self implementing cleanup of PCBs at the Aspire site in Oakland is 0.13 mg/kg (ppm) and not 0.39 mg/kg. The soil cleanup level in the LFR Sampling Plan is revised accordingly to reflect the soil cleanup level specified in USEPA's November 13, 2009 conditional approval letter.

3. SAP, Section 2.2 (Excavation Confirmation Soil Sampling Procedure). This section states:

> "Collect soil samples from the bottom of the excavation on an approximate 30 foot by 30 foot grid, at least one bottom sample will be collected from each excavation." and
>
> "Confirmation soil samples from either the floor or sidewalls that contain 0.39 mg/kg PCB or less shall be a confirmation that high-level PCB soils have been removed. Confirmation soil samples that contain greater than 0.39 mg/kg PCB shall be an indication that the specific grid needs further excavation in order to remove the PCB affected soil from the affected area."

The soil cleanup level referred to in the above cited paragraphs from Section 2.2 of the SAP is changed herein to 0.13 mg/kg (ppm), consistent with USEPA's November 13, 2009 approval letter. Please refer to Item B.1 ("SAP, Soil cleanup verification sampling") above.

4. LFR's November 23, 2009 electronic mail message. As agreed on November 23, 2009, LFR will collect six additional soil cleanup verification samples for PCB analysis only from the locations depicted in "blue highlighter" in the attached LFR map. These six soil cleanup verification samples are incorporated herein by reference into LFR's November 2009 SAP and such SAP is the subject of this conditional approval. LFR will also analyze for PCBs soil cleanup confirmation samples that will be collected around the perimeter of the polygon outlined in red and shown in the attached LFR map. LFR is collecting soil samples every 25 feet along the perimeter of this red-outlined polygon area. These samples are Such samples will also be analyzed with other constituents of concern identified at the site. These soil cleanup verification samples are incorporated herein by reference into LFR's November 2009 SAP and such SAP is the subject of this conditional approval. Although not discussed with LFR on November 23, 2009, PCB excavation areas (e.g., PCB Excavation Area 2) outside of the red-outlined "polygon area" should also be reviewed in similar manner as PCB Excavation Area 3 and the polygon area to determine if additional soil cleanup verification samples are necessary in light of the 0.13 mg/kg cleanup level for PCBs. The detection limit for areas showing that PCBs were not detected should be reviewed to ensure the PCB detection limit used in the sample analysis is below the PCB cleanup level.

5. "Additional Soil Sampling" and "Rationale for Additional Soil Sampling" sections in LFR's October 23, 2009 Self Implementing Cleanup Plan. These sections of the self implementing cleanup plan include additional soil characterization samples to be collected in certain areas (e.g., steam sump, beneath and around sewer lines, beneath and around the compressor area) at the Aspire site. These sections of the cleanup plan are incorporated herein by reference into LFR's November 2009 SAP and such SAP is the subject of this conditional approval. Depending on the sampling and analysis results, soil cleanup and cleanup verification may be necessary. Soil sampling must be conducted in accordance with 40 CFR 761, Subpart N. If necessary, based on site characterization sampling and analysis data for the areas described in the cited sections of the LFR October 2009 cleanup plan, soil cleanup and cleanup verification sampling may need to be conducted. Soil cleanup and cleanup verification sampling must be conducted in accordance with 40 CFR 761, Subpart O and 40 CFR 761.61(a)(6). The soil cleanup level for PCBs at the Aspire school site is 0.13 mg/kg.

6. SAP, Section 2.4 (Sampling Equipment Decontamination). Decontamination of sampling equipment, movable equipment, and tools must be done in accordance with 40 CFR 761.79(c)(2) as required in Condition 3 of USEPA's November 13, 2009.

7. SAP, Section 2.4.2 (Management of Investigation Derived Wastes. LFR must follow the requirements in Condition 5 of USEPA's November 13, 2009 approval letter for offsite disposal of all wastes containing PCBs, including among others, soils exceeding the PCB cleanup level of 0.13 mg/kg.

Please let me know if you have any questions concerning the matters addressed in this message.

Sincerely,

Carmen D. Santos, Project Manager
RCRA Corrective Action Office
Waste Management Division
USEPA Region 9
415.972.3360
fax: 415.947.3533

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Via U.S. Postal Service and Electronic Mail

June 16, 2011

Mr. Mike Barr
College for Certain, LLC - Aspire Public Schools
Chief Financial Officer
1001 22nd Avenue, Suite 100
Oakland, CA 94606

Re: Aspire Public School, 1009 66th Avenue, Oakland, California – USEPA November 13, 2009 Approval of Polychlorinated Biphenyls' Cleanup Notification Under Toxic Substances Control Act – New Request for Additional Cap Modification

Dear Mr. Barr:

This letter responds to Ron Goloubow's (Arcadis) April 25, 2011 letter[1] requesting on behalf of College for Certain, LLC additional modifications to the cap for soils contaminated with polychlorinated biphenyls (PCBs) required under the Toxic Substances Control Act (TSCA) regulations in 40 CFR 761.61(a)(7). On November 13, 2009, the U.S. Environmental Protection Agency, Region 9 (USEPA) approved with conditions the October 23, 2009 *"Toxic Substances Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California"* (Notification) prepared by Arcadis for Aspire Public Schools. That approval under 40 CFR 761.61(a) (self-implementing PCB cleanup) requires a cap be constructed at the entire Aspire site consistent with the requirements in 40 CFR 761.61(a)(7) for a concrete cap. Such a cap is required to be 6 inches thick.

In the attached letter, Arcadis is proposing an alternate cap design for the entire site-wide cap and excluding those areas of the cap where rat slabs will be constructed for the school's modular buildings. USEPA's April 5, 2011 approved the rat slab design that Arcadis had proposed in March 2011 and such design also modified the site-wide cap. The rat slab is a portion of the site-wide cap that USEPA required in its November 13, 2009 conditional approval of the October 23, 2009 Notification for the Aspire school site.

The additional cap modifications proposed in the attached Arcadis' April 25, 2011 letter and described in Figure 2 (Proposed Pavement Plan) of that letter differ from the cap requirements in 40

[1] Letter from Ron Goloubow (Arcadis) dated April 25, 2011 (Subject: "Proposed Toxic Substances Control (TSCA) Cap for Pavement Areas – Former Pacific Motors Facility, 1009 66th Avenue, Oakland, California") to Carmen Santos (USEPA Region 9).

CFR 761.61(a)(7) and include landscape areas. Figure 2 also describes the soils that will be used to construct the proposed landscape areas; and those areas were not a feature of the original site-wide cap proposed in the October 2009 Notification consistent with the cap requirements in 40 CFR 761.61(a)(7).

We are approving the proposed design for the site-wide cap (excluding the already approved design for the rat slab areas) and landscape areas described in the attached Arcadis' letter under the TSCA regulations in 40 CFR 761.61(c) (risk-based cleanup option) with the conditions established below. This approval modifies the site-wide cap (excluding the rat slabs) required in Condition 8 of USEPA's November 13, 2009 conditional approval letter.

Conditions of Approval for Additional Site-Wide Cap Modifications

1. **Imported Soil for Use at the Aspire Site.** Within 15 days after the date of this approval, please submit a summary of the sampling approach that Arcadis will use to collect samples of imported soils planned to be used at the Aspire site in the landscape areas and possibly at other areas of the site. This summary should also be submitted to the Alameda County Department of Environmental Health (ACDEH). The California Department of Toxic Substances Control (DTSC) *"Information Advisory Clean Imported Fill Material,"* dated October 2001 or latest revision should be used as guidance in developing the required summary. PCBs in the imported soil must be below the site cleanup level of 0.13 mg/kg total PCBs as Aroclors. The levels of non-PCB contaminants must be below the criteria referenced in the Advisory as modified by recent criteria updates. Discrete soil samples must be collected instead of composite samples.

   Within 10 days after Arcadis' receipt of the laboratory analytical results for the imported soil samples, please submit the laboratory analysis results to USEPA for review before imported soils are placed in the landscape areas designated in Figure 2 of the attached Arcadis' letter. This data must also be provided to ACDEH.

2. **Proposed Landscape Areas.** As described in the attached Arcadis' letter, the proposed landscape areas will consist of an 18-inch layer of cement-treated site soils (bottom layer), a 10-inch soil layer (middle layer) from soils excavated at the site during trenching, and a 12-inch layer (top layer) of imported soils. According to Arcadis, the bottom soil layer contains PCBs at concentrations below the site-specific cleanup level of 0.13 total PCBs as Aroclors. The 10-inch native soil layer proposed to be added above the 18-inch cement-treated soil layer must be replaced with imported soils that have been tested as required in Condition 1 above. This requirement is based on the fact that soils derived from trench excavations at the site that have not been tested for PCBs and other non-PCB contaminants are proposed for use in the 10-inch soil layer for the landscape areas. Edible plants, fruits, and vegetables should not be planted in the proposed landscape areas.

3. **Notification to Alameda County Department of Environmental Health (ACDEH).** The ACDEH must be notified of the proposed changes to the site-wide cap and inclusion of landscape areas in the cap design given the County's regulatory involvement with the Aspire site.

4. **Modified Site-Wide Cap.** Approval of the modified site-wide cap is only in context to the ability of such cap to prevent human and ecological exposures to PCB levels remaining at the site consistent with the cap requirements in USEPA's November 13, 2009 letter approving the Notification and the TSCA regulations. This approval does not cover structural issues related to the ability of the cap to properly support any estimated load(s) used in developing the cap design.

This approval does not modify Condition 9 in USEPA's November 13, 2009 letter conditionally approving Aspire's Notification. Condition 9 requires maintenance and repair of the cap in perpetuity and the requirements in that Condition are equivalent and consistent with the requirements in 40 CFR 761.61(a)(8).

We look forward to being of assistance to College for Certain, LLC during implementation of the work remaining in the Notification as modified by the conditions of approval; and to the construction of the site-wide cap as modified by the conditions of approval herein and in USEPA's April 5, 2011 approval letter. Please call Carmen Santos of my staff at 415.972.3360 if you have any questions concerning this letter.

Sincerely,

for Jeff Scott, Director
Waste Management Division

Enclosures (1)

Cc: Ron Goloubow, Arcadis
Michael Rueda, Pacific Charter School Development
Paresh Khatri, Alameda County Environmental Health
Arlene Kabei, USEPA R9
Steve Armann, USEPA R9
Carmen Santos, USEPA R9

ARCADIS
Infrastructure, environment, buildings

ARCADIS U.S., Inc.
1900 Powell Street 11th Floor
Emeryville, CA 94608
Tel 510.652.4500
Fax 510.652.4906
www.arcadis-us.com

Environmental

Ms. Carmen Santos
U.S. Environmental Protection Agency, Region 9
Mail Code WST-5
75 Hawthorne Street
San Francisco, California 94105

sent via email only

Subject:
Proposed Toxic Substance Control Act (TSCA) Cap for Pavement Areas – Former Pacific Electric Motors Facility, 1009 66th Avenue, Oakland, California

Date:
April 25, 2011

Contact:
Ron Goloubow

Phone:
510.596.9550

E-mail:
ron.goloubow@arcadis-us.com

Our ref:
EM009155.0010.00001

Dear Ms. Santos:

On behalf of College for Certain, LLC (CFC), ARCADIS U.S., Inc. (ARCADIS) has prepared this letter to provide the revised details regarding the design of the Toxic Substance Control Act (TSCA) Cap for pavement and landscaped areas to be installed at 1009 66th Avenue in Oakland, California ("the Site"; Figures 1, and 2). The purpose of the cap is to prevent human and ecological exposure to any soil that may contain polychlorinated biphenyls (PCBs) at concentrations greater than the site specific clean-up goal of 0.135 milligrams per kilogram. As we have discussed, PCB-affected soil that might remain at the Site would likely be located within the interval of the cement treated soil. Depended upon the pavement and landscaping design provided below, that soil would be covered by a minimum of 6 to 13 inches of cap material (see pavement details on Figure 2).

Proposed Pavement Design

The details regarding the proposed pavement design for the Site is illustrated on Figure 2. As illustrated there are six different designs for pavement thicknesses depended upon the specific traffic - Site use in the area.

The proposed TSCA Cap designs will be comprised as follows (from the bottom up to the ground surface):

Trash Enclosure Area

- Native soil
- 18 - Inches of cement treated native soil
- 6 - Inches of imported aggregate base rock and
- 6- Inches of Portland cement concrete

Pedestrian Walkway Areas - Concrete

- Native soil
- 18 - Inches of cement treated native soil
- 4- Inches of imported aggregate base rock and
- 4- Inches of Portland cement concrete

Vehicle Traffic Areas

- Native soil
- 18 - Inches of cement treated native soil
- 10- Inches of imported aggregate base rock and
- 3- Inches of asphalt concrete

Parking Areas

- Native soil
- 18 - Inches of cement treated native soil
- 8- Inches of imported aggregate base rock and
- 2.5- Inches of asphalt concrete

Pedestrian Walkway Areas - Asphalt

- Native soil
- 18 - Inches of cement treated native soil
- 4- Inches of imported aggregate base rock and
- 2- Inches of asphalt concrete

Landscaped Areas

- Native soil
- 18 - Inches of cement treated native soil
- 10- Inches of native soil
- 12- Inches of imported top soil

Closing

Blackwell Construction (on behalf of CFC) is in the process of installing the modular (re-locatable) buildings. The next phase of the construction project at the Site will be to install the "hard-scape" that will include the asphalt and concrete pavement area described above.

ARCADIS will contact representatives of U.S. EPA on Monday, May 2, 2011 to determine if the design provided in this letter is acceptable. We at ARCADIS appreciate working with you and your team and look forward to bringing this project to closure with the U.S. EPA in the near future.

Sincerely,

ARCADIS U.S., Inc.

Ron Goloubow, P.G.
Principal Geologist

Copies:
Mike Rueda – Pacific Charter Schools
Brad Kettle – Blackwell Construction

Enclosures:

Figure 1 – Site Vicinity Map
Figure 2 – Proposed Pavement Plan

MAP SOURCE: Copyright 1995, Thomas Bros. Map ALAMEDA COUNTY 2002 Edition

0 2,000 4,000 FEET

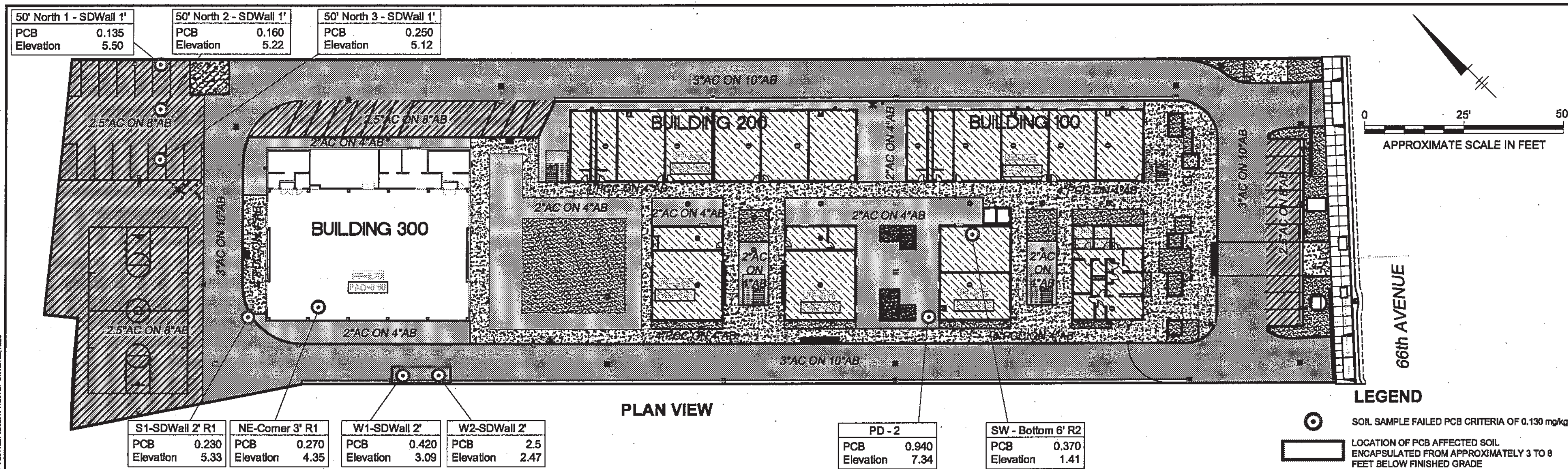
1009 66TH AVENUE, OAKLAND, CALIFORNIA

SITE VICINITY MAP

ARCADIS

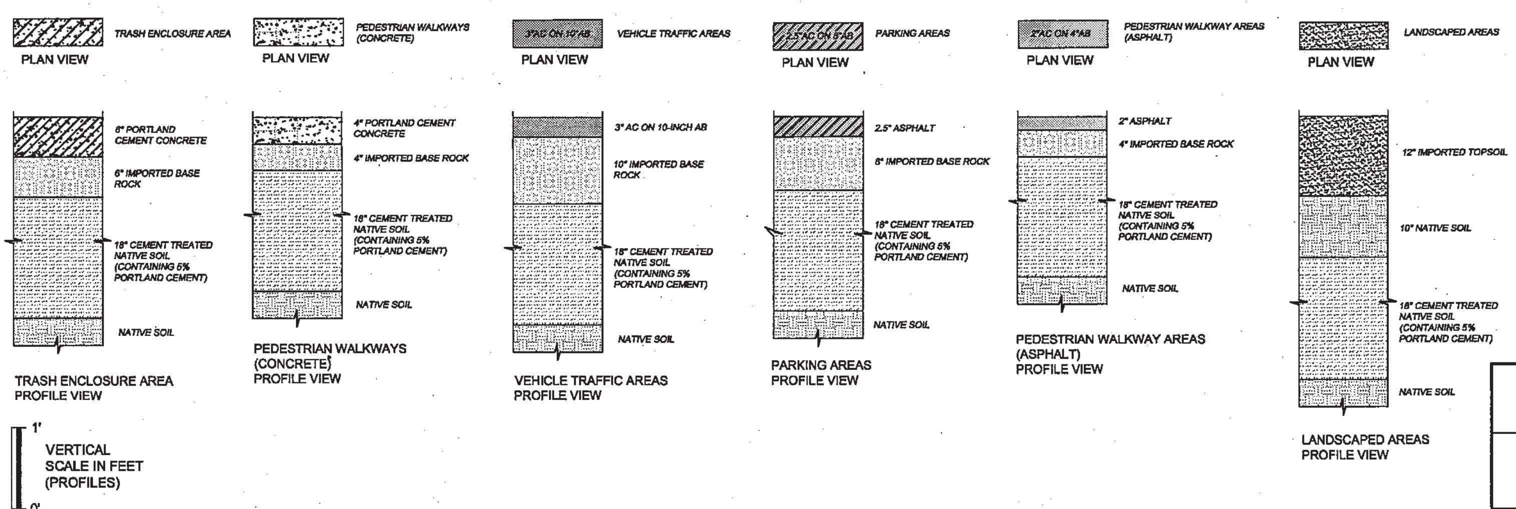
FIGURE 1

DESIGN\003\09155\Figure 1 Site Vicinity - 003-09155.cdr



PLAN VIEW

PAVEMENT DETAILS



LEGEND

- SOIL SAMPLE FAILED PCB CRITERIA OF 0.130 mg/kg
- LOCATION OF PCB AFFECTED SOIL ENCAPSULATED FROM APPROXIMATELY 3 TO 8 FEET BELOW FINISHED GRADE
- NEW CONCRETE SLAB (6" REINFORCED PCC ON 6" CLASS 2 AB ON 6" RECOMPACTED SUBGRADE (90%)) PER GEOTECHNICAL REPORT
- NEW CONCRETE SLAB (4" REINFORCED PCC ON 4" CLASS 2 AB ON 6" RECOMPACTED SUBGRADE (90%)) PER GEOTECHNICAL REPORT
- 3"AC ON 10"AB — NEW AC PAVEMENT-TRAFFIC SECTION (6"AC ON 6" CLASS 2 AB ON 6" RECOMPACTED SUBGRADE (95%)) PER GEOTECHNICAL REPORT
- 2.5"AC ON 8"AB — NEW AC PAVEMENT-PARKING SECTION (6"AC ON 4" CLASS 2 AB ON 6" RECOMPACTED SUBGRADE (95%)) PER GEOTECHNICAL REPORT
- 2"AC ON 4"AB — NEW AC PAVEMENT-PEDESTRIAN SECTION (2"AC ON 4" CLASS 2 AB ON 6" RECOMPACTED SUBGRADE (95%)) PER GEOTECHNICAL REPORT
- LANDSCAPING: 12" TOP SOIL OVER 10" CAP OF IMPORTED SOIL. COMPACT CAP TO 90%. PLACE ORANGE WARNING NETTING UNDERNEATH CAP.
- RAT SLAB UNDERNEATH ALL MODULAR BUILDINGS: 2"AC ON 4" CLASS 2 AB

mg/kg = MILLIGRAMS PER KILOGRAM

SOURCES: UNDERWOOD & ROSENBLUM, INC.
K2A ARCHITECTURE + INTERIORS
GRADING AND PAVING PLANS

PROPOSED CHARTER SCHOOL SITE
1009 66TH AVENUE, OAKLAND, CALIFORNIA

PROPOSED PAVEMENT PLAN

ARCADIS

FIGURE
2

Trestler, Lauren

From: Santos.Carmen@epamail.epa.gov
Sent: Tuesday, November 27, 2012 4:44 PM
To: Goloubow, Ron
Subject: RE: Aspire School - Oakland, CA - Deed Notice and Operation and Maintenance Plan

Hello Ron:

I am still working on your project. I was out most of last week and the week before that I was very sick. All that resulted in a setback of my reviews of the different Aspire documents. I feel terrible about that set back and I am trying my best to get your project wrapped up from our end.

Toward the end of this week I will give you another update.

Thank you for your patience.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
RCRA Corrective Action Office (WST-5)
Waste Management Division
USEPA Region 9
415.972.3360
santos.carmen@epa.gov

"Think left and think right and think low and think high. Oh, the thinks you can think up if only you try!" **Dr. Seuss**

****

From: "Goloubow, Ron" <Ron.Goloubow@arcadis-us.com>
To: Carmen Santos/R9/USEPA/US@EPA,
Date: 11/27/2012 07:07 AM
Subject: RE: Aspire School - Oakland, CA - Deed Notice and Operation and Maintenance Plan

---

Any update???

Ron Goloubow, PG | Principal Geologist | **ron.goloubow@arcadis-us.com**
ARCADIS U.S., Inc. | 2000 Powell Street, Suite 700 | Emeryville, CA 94608
T. 510.596.9550 | M. 510.501.1789 | F. 510.652.4906
www.arcadis-us.com

From: Goloubow, Ron
Sent: Wednesday, October 24, 2012 2:40 PM
To: 'Carmen Santos'
Subject: FW: Aspire School - Oakland, CA - Deed Notice and Operation and Maintenance Plan

Ron Goloubow, PG | Principal Geologist | ron.goloubow@arcadis-us.com
ARCADIS U.S., Inc. | 2000 Powell Street, Suite 700 | Emeryville, CA 94608
T. 510.596.9550 | M. 510.501.1789 | F. 510.652.4906
www.arcadis-us.com

From: Goloubow, Ron
Sent: Friday, October 28, 2011 9:45 AM
To: Santos.Carmen@epamail.epa.gov; paresh.khatri@acgov.org
Cc: 'Kahlmus Eatman'; ramiro@pacificcharter.org; 'Mala Batra'
Subject: Aspire School - Oakland, CA - Deed Notice and Operation and Maintenance Plan

Dear Carmen & Paresh.

The draft deed notice and operation and maintenance plan for the subject site is attached for your review. Following your review of these documents we would like to finalize and record these documents. Please contact me with regard to your schedule for reviewing the attached materials so that we can plan accordingly.

Ron.

Ron Goloubow, PG | Principal Geologist | ron.goloubow@arcadis-us.com
ARCADIS U.S., Inc. | 2000 Powell Street, Suite 700 | Emeryville, CA 94608
T. 510.596.9550 | M. 510.501-1789 | F. 510.652.2246
www.arcadis-us.com

Trestler, Lauren

From: Santos.Carmen@epamail.epa.gov
Sent: Thursday, December 06, 2012 2:27 PM
To: Goloubow, Ron
Subject: PCBs: Aspire Site in Oakland, California - Files in CD ROM cannot be read

Hello Ron:

The information that you included in the CD ROM containing the attachments to the June 29, 2012 Addendum Report cannot be read. Please send the attachments in a new CD ROM and via US Postal Service mail. We are trying to complete the review of the Aspire remediation and risk assessment and cannot because the documents that were uploaded into the CD ROM cannot be read.

Thank you for your courtesies. I look forward to receiving a new CD ROM and hard copies of the attachements via US Postal Service.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
RCRA Corrective Action Office (WST-5)
Waste Management Division
USEPA Region 9
415.972.3360
santos.carmen@epa.gov

***"Think left and think right and think low and think high. Oh, the thinks you can think up if only you try!"* Dr. Seuss**

****

Trestler, Lauren

From: Santos.Carmen@epamail.epa.gov
Sent: Monday, December 10, 2012 8:04 PM
To: Goloubow, Ron
Cc: Wilson.Patrick@epamail.epa.gov
Subject: PCBs: Aspire School Site, Oakland, CA - USEPA Comments on Addendum Report and Other Documents
Attachments: EPA ASPIRE PUBLIC SCHOOLS MANIFESTS THREE.pdf; Environmental Restriction Template.doc

Hello Ron:

Below are my comments on several documents that you submitted for review. We discussed many of these comments during our conference call on December 7, 2012. Please make revisions responsive to the comments and consistent with the December 7, 2012 conference call.

Please send us a CD-ROM containing the appendices or attachments to the Addendum since the original CD-Rom appears to be defective.

In reference to the O&M Plan, given the significance of the matters covered in Sections 4. through 8. of that plan, please schedule a conference call to go over those sections of the plan. After that future call, I may have additional comments on the O&M Plan. For now, comments on the O&M Plan are included in comments 14 through 19.

Addendum Report (PCB cleanup report)

Pages 2 to 3, Last bullet ("Revised figures showing: . . .")

1. Addendum. The sub-bullet under the Last bullet states that "Areas where cleanup levels were achieved, where the cleanup levels were not achieved and where soils contaminated with PCBs above the cleanup level were encapsulated. . . ." The sub-bullet should be expanded to clarify that "encapsulated" soils are beneath the cap and the depth at which the "encapsulated" soils are located beneath the cap.

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Carmen D. Santos
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Trestler, Lauren

From: Santos.Carmen@epamail.epa.gov
Sent: Thursday, January 31, 2013 2:47 PM
To: Khatri, Paresh, Env. Health
Cc: Goloubow, Ron
Subject: Fw: PCBs: Aspire School Site, Oakland, CA - USEPA Comments on Addendum Report and Other Documents
Attachments: EPA ASPIRE PUBLIC SCHOOLS MANIFESTS THREE.pdf; Environmental Restriction Template.doc

Hello Paresh:

I hope 2013 is going well for you so far.

This message is to update you on EPA's next steps regarding the Aspire School site in Oakland. We reviewed the report and the deed restriction. The message attached below contains our comments on the Addendum Report that Arcadis had sent to us for review. Ron Goloubow will be sending a redline/strike out revised draft Addendum Report by the end of next week to us. We hope that all issues associated with the report and any related to the deed restrictions are resolved by the end of March 2013. We have a

We still need to receive a revised deed restriction that meets our requirements. EPA would be a third party beneficiary. Do you know if the Alameda County Environmental Health will be the Covenantee on the Aspire deed restriction? Please let me know. Thank you.

Please call me if you have any questions concerning this message.

Sincerely,
Carmen

Carmen D. Santos
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----- Forwarded by Carmen Santos/R9/USEPA/US on 01/31/2013 11:21 AM -----

From: Carmen Santos/R9/USEPA/US
To: Ron.Goloubow@arcadis-us.com,
Cc: Patrick Wilson/R9/USEPA/US@EPA
Date: 12/10/2012 05:03 PM
Subject: PCBs: Aspire School Site, Oakland, CA - USEPA Comments on Addendum Report and Other Documents

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Hello Ron:

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the December 7, 2012 conference call.

Please send us a CD-ROM containing the appendices or attachments to the Addendum since the original CD-Rom appears to be defective.

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Trestler, Lauren

From: SANTOS, CARMEN <Santos.Carmen@epa.gov>
Sent: Tuesday, March 05, 2013 2:14 PM
To: Goloubow, Ron
Subject: RE: PCBs: Aspire School Site, Oakland, CA - USEPA Comments on Addendum Report and Other Documents

Hello Ron:

Thank you for sending the revised PCB cleanup completion report. I started to review it. Are the attachments larger than 25 MBs? I am working from home today and do not have the CD ROM here. Would you be able to send any attachments that I may need? Please let me know.

In addition, would you be interested in an example of a land use covenant for a site where a cap was constructed to cover PCB contaminated soils? For the Aspire site we have required a land use covenant. Please let me know if interested and I will send you the most recent example of a land use covenant for a California site involving caps for PCB contaminated soils.

Thank you for your patience and courtesies.

Regards,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
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From: Goloubow, Ron [mailto:Ron.Goloubow@arcadis-us.com]
Sent: Friday, March 01, 2013 12:34 PM
To: SANTOS, CARMEN
Subject: RE: PCBs: Aspire School Site, Oakland, CA - USEPA Comments on Addendum Report and Other Documents

Carmen I have completed the revisions to the addendum report. I am moving on to the soil management plan and operation plan. If you would like to review the revised text of the report; it is attached…

Ron Goloubow, PG | Principal Geologist | **ron.goloubow@arcadis-us.com**

ARCADIS U.S., Inc. | 2000 Powell Street, Suite 700 | Emeryville, CA 94608
T. 510.596.9550 | M. 510.501.1789 | F. 510.652.4906
www.arcadis-us.com

From: Santos.Carmen@epamail.epa.gov [mailto:Santos.Carmen@epamail.epa.gov]
Sent: Monday, December 10, 2012 5:04 PM
To: Goloubow, Ron
Cc: Wilson.Patrick@epamail.epa.gov
Subject: PCBs: Aspire School Site, Oakland, CA - USEPA Comments on Addendum Report and Other Documents

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Addendum Report (PCB cleanup report)

Pages 2 to 3, Last bullet ("Revised figures showing: . . .")

1. Addendum. The sub-bullet under the Last bullet states that "Areas where cleanup levels were achieved, where the cleanup levels were not achieved and where soils contaminated with PCBs above the cleanup level were encapsulated. . . ." The sub-bullet should be expanded to clarify that "encapsulated" soils are beneath the cap and the depth at which the "encapsulated" soils are located beneath the cap.

2. Addendum. Figure 3 ("System Plan Showing Pavement Plan / Cap In-Place Soil Exceeding PCB Cleanup Goals"). We were under the understanding that Arcadis had agreed to excavate and consolidate in the W1-SDWall 2' and W2-SDWall 2' area all the soils that exceeded the cleanup level at the site. Please clarify if that approach was followed. If a different approach was followed the Report should be revised to explain how soils above the PCB cleanup level was handled. Comparison of Figure 3 to the table ("Post-Demolition Surface Soil Samples") on page 3 indicates that except for PD-1, PD-2, and PD-6, the remaining data in that table is not included in Figure 3. Is Figure 3 supposed to show the PCB concentrations summarized in the table found in page 3? Please clarify. In addition, if all soils containing PCBs above the cleanup level were consolidated in the W1-SDWall 2' and W2-SDWall 2' area, or consolidated in another area in addition to the W1 and W2 areas, or left in place in addition to been consolidated in a specific area then Figure 3 should include clarification notes addressing this matter. Please revise the text of the Report and Figures in response to this comment.

3. Addendum. The Report states in page 3 that "An area measuring approximately 10 feet long by 10 feet wide by 2 feet below grade was excavated at each of three locations (PD-3, PD-4, and PD-5; see Figure 3)." However, the locations PD-3 through PD-5 are not depicted in Figure 3. In addition, the Report does not state whether the soils removed from PD-3 through PD-5 were disposed offsite or consolidated onsite. Please clarify the fate of the soils excavated from PD-3 through PD-5 and PD-1, PD-2, and PD-6.

Pages 9 to 10 of the Report:

4. Addendum. What is the in-situ PCB concentration for soils in EXC-PCB2, EXC-PCB3, EXC-PCB4, and EXC4? In addition, please also confirm the concentration of PCBs in soils from EXC4 that were mixed with soils from the other excavations. According to the report the soil was stockpiled and sampled for PCBs to determine the PCB concentration for disposal. And the soils were disposed of at the Republic Services Keller Canyon Landfill which is a construction debris landfill. The in-situ concentration and not the concentration of PCBs in the stockpiled soils should had been used to determine the disposal method and facility as required in the regulations. Also, according to the report, EXC4 soils contained PCBs above 50 mg/kg. Please revise the Report to address the needed clarifications.

5. Addendum. The Report states that copies of manifest numbers: 005417521JJK, 005417522JJK, and 005417534JJK have not been received from Kettlemann. USEPA requested that Kettleman provide copies of those manifests. Attached are the pdf files containing that information.

6. Addendum. What was the PCB concentration in concrete and other debris consolidated at the site and disposed of at the Republic Services' Keller Canyon Landfill? Was the concentration of PCBs in each of the different materials (e.g., wood, concrete) below 50 mg/kg total PCBs?

7. Addendum. Nomenclature for sample identification codes is inconsistent within the Report and the Figures in the Report. These inconsistencies need to be reconciled.

8. Addendum. Soil Disposal Summary. Please review the table and text in reference to the disposal summary and clarify the waste classifications. For instance, PCB remediation waste with PCB concentrations above the cleanup level is being regulated by TSCA for disposal. The difference is in the disposal options based on PCB concentration. 50 ppm and higher, disposal in TSCA or RCRA/TSCA landfill. less than 50 ppm, disposal in TSCA, RCRA/TSCA, municipal solid waste, or construction debris landfill. California regulates PCBs at 50 ppm and higher as a hazardous waste.

Page 5, Revised health risk screening calculations

9. Addendum. The report should explain the meaning of the estimated risk in context to the mitigation measures (e.g., cap) applied to the site to mitigate health risks. The protectiveness of the mitigation measures should be explained in context to the risk reduction that they provide.

Figures

10. Addendum. All figures must be revised to accurately depict the actual PCB residual concentrations and location of those concentrations at the site and actual areas where soils contaminated with PCBs above the cleanup level were consolidated. The figures must also be revised to accurately depict all sampling areas; and sample identification codes for samples representing remaining residual PCB concentrations at the site.

****

Soil Management Plan (SMP)

11. SMP. General comment. The soil management plan must be revised to reflect final conditions at the site and to be consistent with the final PCB cleanup report.

12. SMP. Section 4. Soil Remediation. The second paragraph in Section 4: "The most likely location for affected soil to be encountered during redevelopment activities is along the property boundary at the northwestern portion of excavation PCB3 and the property boundary at the northeastern portion of excavation EXC4." This paragraph is inconsistent with Figure 3 of the Addendum Report and must be revised.

13. SMP. The plan must be revised to include actions that will be taken to properly manage soils containing PCBs during post- redevelopment activities, such as during repairs to the cap and repairs to below ground utilities.

****

Draft Operation and Maintenance Plan for Cap Mitigation Measures (O&M Plan)

14. Cap O&M Plan. General comment. The Cap O&M Plan must be revised to accurately capture current conditions at the site and the final cap as described in the Addendum Report. The Cap O&M Plan, Addendum Report, Soil Management Plan, and Restricted Covenant should be accurate and the information presented not conflict among these documents. Figures presented in all these documents must present consistent and accurate data.

15. Cap O&M Plan. The cap is to be maintained in perpetuity.

16. Cap O&M Plan. Section 1.2.2 (Self-Implementing Cleanup Plan), Paragraph 6. The information presented in this paragraph is incomplete. Based on Figure 3 in the Addendum Report, PCBs above the cleanup level were left in place at several locations in addition to the W1-WSDWall 2' and W2-WSDWall 2' areas.

17. Cap O&M Plan. A restrictive covenant has been prepared for EPA review and not a deed notification.

18. Cap O&M Plan. Section 4.1 (Periodic Inspections). Please describe the training that will be given to school staff proposed to conduct inspections of the cap and provide the qualifications of such personnel to conduct the cap inspections and repairs.

19. Please propose a convenient time for a conference call to discuss Section 4. (O&M Inspections), Section 5. (Intrusive

Work Activities, Section 6. (Reporting and Recordkeeping), Section 7. (Site Access), and Section 8. (Variance, Modification, or Termination of O&M Plan).

****

Covenant and Environmental Restriction on 1009 66th Avenue, Oakland, California

20. Covenant. EPA should be a beneficiary and not a covenantee under the Covenant. Attached is an example template of a restrictive covenant for your use in revising the restrictive covenant for the Aspire site. A restrictive covenant is necessary for the site to ensure the cap is monitored, maintained, and repaired in perpetuity; and that proper procedures are in place for protection of human health and the environment in case the cap is breached to conduct post redevelopment activities such as repairs to underground utilities.

21. Covenant. The information in the covenant needs to be updated to reflect completion of the final PCB remedy at the site and revised cleanup completion reports..

22. Covenant. In addition to referencing several documents in the covenant such as the Soil Management Plan, Operation and Maintenance Plan for the Cap, and Addendum Report, we recommend the following information be included in applicable articles of the covenant:

- Full description and survey coordinates for the cap.
- Figure depicting accurate location and survey coordinates for cleanup verification samples that exceed the cleanup level; and location of consolidated soils containing PCBs. The current figures are not accurate and do not depict all locations where residual PCB concentrations above the cleanup level remain at the site. The exhibits to the covenant need to be revised to reflect accurate information. For example, the "Lands of College for Certain, LLC PCB Encapsulated Area" does not include all areas at the site where PCBs in soils exceed the cleanup level.
- Additional figures as necessary.
- Text explaining the cap must be operated, maintained, and repaired in perpetuity. Modifications to the cap require EPA approval before making the modifications.
- Land use or zoning for the Aspire property.
- Post-redevelopment management of soils that contain PCBs.
- Cap monitoring (or inspection), maintenance, and repair activities including frequency of inspections and schedules for inspections and repairs. Revised cap inspection form.
- In case that a residential redevelopment is decided in the future to be built in the area of the Aspire school, additional soil cleanup may be necessary.
- Management of soils and contingencies when replacing vegetation (e.g., plants, shrubs, trees) in the planters.
- Revised legal descriptions including Parcel 1, Parcel 2, and the PCB Encapsulated Area.
-

23. Covenant. The revised covenant should undergo legal review before resubmitting the document for EPA review.

-

****

Please let me know if you have any questions concerning the above comments.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
RCRA Corrective Action Office (WST-5)
Waste Management Division
USEPA Region 9
415.972.3360

santos.carmen@epa.gov

***"Think left and think right and think low and think high. Oh, the thinks you can think up if only you try!"* Dr. Seuss**

****

Trestler, Lauren

From: Santos.Carmen <Santos.Carmen@epa.gov>
Sent: Thursday, March 21, 2013 2:26 PM
To: Goloubow, Ron
Subject: PCBs: Aspire School Site in Oakland

Hello Ron:

Please send me the contact information for whom we should send the letter approving the cleanup completion report. By tomorrow I will let you know if no further modifications are needed to the addendum report.

I look forward to your reply and thank you for your courtesies.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
santos.carmen@epa.gov

"Think left and think right and think low and think high. Oh, the thinks you can think up if only you try!" Dr. Seuss

---

Before printing this message and/or attachments, think if it is necessary. Think Green.

Trestler, Lauren

From: Santos.Carmen <Santos.Carmen@epa.gov>
Sent: Thursday, March 21, 2013 3:18 PM
To: Goloubow, Ron
Subject: RE: PCBs: Aspire School Site in Oakland

Hello Ron:

Thank you for replying so quickly. Do you have a contact person at College for Certain, LLC? I want a contact that is directly responsible for the Aspire School and that has the authority to negotiate with EPA and Alameda County the land use covenant for that property. I will include Ms. Angela Andrews in the list to get an electronic copy of the letter. Is Mr. Mike Barr still the contact for College for Certain? If so, is the following the correct contact information for Mr. Barr (still need his correct e-mail address)?

College for Certain, LLC – Aspire Public Schools
Chief Financial Officer
1001 22nd Avenue, Suite 100
Oakland, CA 94606

Please let me know if Mr. Barr is still the contact at College for Certain. Given most of our approvals for the PCB cleanup have been addressed to Mr. Barr or College for Certain, we would prefer to send our approval of the PCB cleanup to that organization if that organization is still above the Aspire School in Oakland.

Thank you for your courtesies. I look forward to your reply.

Regards,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
santos.carmen@epa.gov

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---

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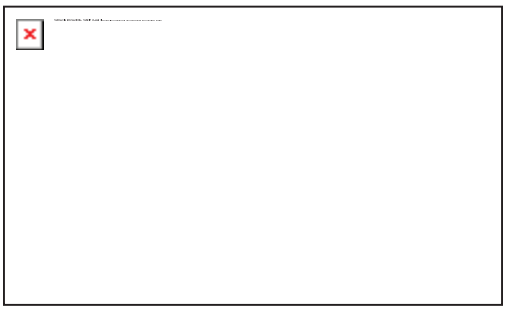
From: Goloubow, Ron [mailto:Ron.Goloubow@arcadis-us.com]
Sent: Thursday, March 21, 2013 11:40 AM
To: Santos.Carmen
Subject: RE: PCBs: Aspire School Site in Oakland



Ron Goloubow, PG | Principal Geologist | **ron.goloubow@arcadis-us.com**

ARCADIS U.S., Inc. | 2000 Powell Street, Suite 700 | Emeryville, CA 94608
T. 510.596.9550 | M. 510.501.1789 | F. 510.652.4906
www.arcadis-us.com

From: Santos.Carmen [mailto:Santos.Carmen@epa.gov]
Sent: Thursday, March 21, 2013 11:26 AM
To: Goloubow, Ron
Subject: PCBs: Aspire School Site in Oakland

Hello Ron:

Please send me the contact information for whom we should send the letter approving the cleanup completion report. By tomorrow I will let you know if no further modifications are needed to the addendum report.

I look forward to your reply and thank you for your courtesies.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
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santos.carmen@epa.gov

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********** ATTACHMENT NOT DELIVERED **********

This Email message contained an attachment named
  image001.jpg
which may be a computer program. This attached computer program could
contain a computer virus which could cause harm to EPA's computers,
network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced
into the EPA network. EPA is deleting all computer program attachments
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If the message sender is known and the attachment was legitimate, you
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extension and resend the Email with the renamed attachment. After
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rename the file extension to its correct name.

For further information, please contact the EPA Call Center at
(866) 411-4EPA (4372). The TDD number is (866) 489-4900.

********** ATTACHMENT NOT DELIVERED **********

Trestler, Lauren

From: Santos, Carmen <Santos.Carmen@epa.gov>
Sent: Monday, March 25, 2013 3:47 PM
To: Goloubow, Ron
Subject: PCBs: Aspire Oakland - Revised Draft Cap OM Plan and Soil Management Plan

Hello Ron:

I have one more page to go to complete reviewing and commenting on the Soil Management Plan. Also, do you think it would be a good idea to combine the Soil Management Plan and the Cap Maintenance Plan into one document. The two issues are so interrelated that combining both plans into one might be an option to consider. Please let me know your thoughts on that idea.

Thank you for your courtesies and patience. I look forward to your reply.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
santos.carmen@epa.gov

"Think left and think right and think low and think high. Oh, the thinks you can think up if only you try!" Dr. Seuss

_____

Before printing this message and/or attachments, think if it is necessary. Think Green.

_____

From: Goloubow, Ron [mailto:Ron.Goloubow@arcadis-us.com]
Sent: Monday, March 25, 2013 11:05 AM
To: Santos, Carmen
Subject: FW: Aspire Oakland - Revised Draft Cap OM Plan

Carmen the most recent version of the text for the Cap O&M plan is attached.

Ron.

Ron Goloubow, PG | Principal Geologist | **ron.goloubow@arcadis-us.com**

ARCADIS U.S., Inc. | 2000 Powell Street, Suite 700 | Emeryville, CA 94608
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www.arcadis-us.com

From: Goloubow, Ron
Sent: Thursday, March 21, 2013 4:04 PM
To: 'Santos.Carmen'
Subject: Aspire Oakland - Revised Draft Cap OM Plan

On to the LUC!!

Trestler, Lauren

From: Santos, Carmen <Santos.Carmen@epa.gov>
Sent: Monday, March 25, 2013 4:32 PM
To: Goloubow, Ron
Subject: PCBs: Aspire School Site - 1009 66th Avenue, Oakland, California - PCB Cleanup Completion Report (Revised Addendum) - Follow Up and Additional Comments

Hello Ron:

Thank you for the opportunity to discuss with you my comments on ARCADIS' February 25, 2013 revised version of the PCB cleanup completion (revised Addendum Report). I have the following additional comments based on my March 22, 2013 review of the Soil Management Plan, internal consultation regarding soils contaminated with soluble lead, and additional review of the January 31, 2013 comments on a previous version of the Addendum Report sent to ARCADIS on that same date at 11:47 AM.

1. Please change the phrase "PCB-affected soils" to "PCB-containing soils."

2. Regarding the "Soil Disposal Summary" table in the Addendum, please change "Non-RCRA (Lead)" to "Hazardous soil (Lead)" until USEPA confirms if that waste was also legitimately regulated under federal RCRA and not just California state hazardous waste. Please provide a summary of the soil analysis results for lead.

3. Please revise the Addendum Report to be responsive to Comment 8 ("Addendum. Soil Disposal Summary") in the January 31, 2013 comments (sent to you via e-mail message at 11:47 AM) on the previous version of the Addendum Report.

4. Provide a CD-ROM containing all analytical data for additional site characterization and cleanup verification samples. To the best of our knowledge, that data has not been provided to USEPA. We need to conduct a focused review of the data as part of the approval of the cleanup completion report. That approval may not proceed without an opportunity to review the requested data. We need this data right away. Thank you for your attention to this matter.

5. As we discussed on a conference call with you subsequent to our transmission of the January 31, 2013 comments and before ARCADIS' submission of the February 25, 2013 revised Addendum Report, our preference is that such become the actual PCB cleanup completion report and other reports that might be available be referenced in the cleanup completion report and included in the CD ROM accompanying the PCB cleanup completion report. Also, all USEPA correspondence approving the additional characterization for PCBs and cleanup of PCBs at the Aspire School site be included in the CD ROM accompanying the cleanup completion report. The CD-ROM must also include all ARCADIS correspondence related to the PCB cleanup as well as that correspondence addressing design and construction of the cap. In our opinion, the Soil Management Plan and the plan for cap inspection, maintenance, and repair be included in the cleanup completion report as appendices to that report and both plans (or one plan addressing soil management and cap inspection, maintenance, and repair) be included in the CD ROM accompanying the cleanup completion report.

6. Please submit a read-line version of the cleanup completion report that is responsive to the comments we discussed on March 22, 2013 and additional comments included in this message. Also, please use our January 31, 2013 comments as a checklist to ensure that all USEPA comments on the cleanup completion report have been addressed in the redline version we are requesting via this message.

With the above additional comments on the PCB cleanup completion report and the many comments discussed with you on March 22, 2013 via conference call, we believe that College for Certain/ARCADIS can move forward with revisions to the February 25, 2013 cleanup completion report and submit a revised redline version of the cleanup completion report.

As to the revised Soil Management Plan, I prepared comments on March 22, 2013 and I am completing my comments on the last page of the document and will send those comments to you today. The word file will contain all the comments and changes we want made to the Plan. In addition, please consider the idea of combining the soil management plan with the plan for cap inspection, maintenance, and repair.

If you have any questions concerning this message, please call me at 415.972.3360.

Thank you for your courtesies and patience.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
santos.carmen@epa.gov

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---

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Trestler, Lauren

From: Santos, Carmen <Santos.Carmen@epa.gov>
Sent: Monday, March 25, 2013 6:23 PM
To: Goloubow, Ron
Subject: FW: Soil Management Plan Aspire Oakland-2013-01-03-RV009155.doc
Attachments: Soil Managment Plan Aspire Oakland-2013-01-03-RV009155.doc; 03_25_2013 USEPA Comments_Soil Manage Plan_Aspire_Arcadis_.docx

Hello Ron:

Thank you for the opportunity to comment on the attached Soil Management Plan for the Aspire School Site in Oakland, CA. My comments are electronically annotated in the attached file: "03_25_2013 USEPA Comments Soil management Plan Aspire ARCADIS.docx." If you have any questions concerning my comments, please call me.

In addition to the annotated comments, please revise the document in context to post redevelopment activities. If additional construction is planned or is currently anticipated to occur at the Aspire School site in the future, the SMP must include a standalone section addressing this possibility and how soil management (characterization, temporary storage, and disposal) will be conducted.

Therefore, also in context to potential future construction at the Aspire site (if that is anticipated), the Cap inspection, maintenance, and repair plan must address the possibility for future significant disturbance of the approved TSCA cap for the site. And in that situation, proper notification to that effect must be made to USEPA that includes the plans to modify the cap and protect those sections of the cap that will not be disturbed.

In general, the SMP seems to be written for site redevelopment when the site is already redeveloped. Please make appropriate adjustments to the plan so it will address the current status of the site and future post-redevelopment activities at the site. The SMP must also be consistent with the final PCB cleanup completion report for the Aspire site. Please also ensure that comments made on the previous version of the SMP and included in USEPA's January 31, 2013 e-mail message to you (sent at 11:47 AM) are addressed. In addition, the SMP must be consistent with USEPA's approvals dated November 13, 2009, April 5, 2011, June 11, 2011, and electronic e-mail messages not captured in those approval letters.

Please submit a red-line revised version of the SMP for review as soon as it is available.

Thank you for your courtesies and patience.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
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From: Goloubow, Ron [mailto:Ron.Goloubow@arcadis-us.com]
Sent: Wednesday, March 13, 2013 10:53 AM
To: SANTOS, CARMEN
Subject: Soil Management Plan Aspire Oakland-2013-01-03-RV009155.doc

Hi Carmen – The revised soil management plan is attached. IF you could please make your comments on the attached word filed.

I am not on to the O&M plan and revising Figure 3…

Trestler, Lauren

From: Santos, Carmen <Santos.Carmen@epa.gov>
Sent: Tuesday, April 02, 2013 9:06 PM
To: Goloubow, Ron
Subject: PCBs: Aspire Public School Oakland --- Cap O&M Plan
Attachments: 04_02_2013_USEPA Comments_Cap OM Plan_ARCADIS_Aspire_CollegeforCertain_.docx

Hello Ron:

Attached are our comments on the CAP O&M Plan. Please call me if you have any questions concerning the comments. I will be out of the office on business travel for the remaining of the week and will be back in the office on April 8, 2013.

Thank you for your courtesies and have a great day.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
santos.carmen@epa.gov

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---

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Trestler, Lauren

From: Santos, Carmen <Santos.Carmen@epa.gov>
Sent: Monday, April 29, 2013 6:55 PM
To: Goloubow, Ron
Subject: PCBs: Aspire School, 66th Avenue, Oakland, CA ---- Status of Revised Documents

Hello Ron:

Hope this message finds you well. You have our comments on all the documents that you submitted for EPA's review. Please let me know the status of the revised versions of these documents and when should we receive them for review and approval. A revised land use covenant (LUC) is also necessary for review. We want to complete the review of the revised documents still to be submitted and LUC so that (1) an approval can be issued for the cleanup completion report and (2) agreements can be reached on the LUC that will facilitate recordation of the LUC. We want to close this PCB cleanup case within a month. We cannot keep waiting for the revised documents and keep re-engaging on this project. Such approach is inefficient and will affect work time already allocated for other projects and the schedule to complete those other projects.

Thank you for your courtesies and attention to this matter. I look forward to your prompt reply.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
santos.carmen@epa.gov

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---

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Trestler, Lauren

From: Santos, Carmen <Santos.Carmen@epa.gov>
Sent: Thursday, June 27, 2013 7:02 PM
To: Goloubow, Ron
Cc: Armann, Steve
Subject: FW: PCBs: Aspire School, 66th Avenue, Oakland, CA ---- Status of Revised Documents

Hello Ron:

I have not heard from you since May 3, 2013. Aspire / College for Certain need to submit the revised documents and revised LUC for review and approval. This case needs to be closed. Please provide the name, phone number, and e-mail address of the contact at College for Certain with whom we should discuss this matter and reach resolution.

Thank you for your courtesies.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
santos.carmen@epa.gov

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---

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From: Goloubow, Ron [mailto:Ron.Goloubow@arcadis-us.com]
Sent: Friday, May 03, 2013 4:58 PM
To: Santos, Carmen
Subject: RE: PCBs: Aspire School, 66th Avenue, Oakland, CA ---- Status of Revised Documents

Carmen –The revisions to the text of the summary report is complete.

The EPA comments on the inspection plan still need to be addressed and the LUC needs to be prepared.

I totally agree with you that this work needs to get finished up and soon.

Thanks for your help on this project.

I am planning to spend time on these documents during the week of May 6, 2013 and will contact you with any questions.

Ron.

Ron Goloubow, PG | Principal Geologist | **ron.goloubow@arcadis-us.com**

ARCADIS U.S., Inc. | 2000 Powell Street, Suite 700 | Emeryville, CA 94608
T. 510.596.9550 | M. 510.501.1789 | F. 510.652.4906
www.arcadis-us.com

From: Santos, Carmen [mailto:Santos.Carmen@epa.gov]
Sent: Monday, April 29, 2013 3:55 PM
To: Goloubow, Ron
Subject: PCBs: Aspire School, 66th Avenue, Oakland, CA ---- Status of Revised Documents

Hello Ron:

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Thank you for your courtesies and attention to this matter. I look forward to your prompt reply.

Sincerely,
Carmen

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Voice: 415.972.3360
santos.carmen@epa.gov

"Think left and think right and think low and think high. Oh, the thinks you can think up if only you try!" Dr. Seuss

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Trestler, Lauren

From: Santos, Carmen <Santos.Carmen@epa.gov>
Sent: Friday, August 30, 2013 4:00 PM
To: Goloubow, Ron; Angela Andrews
Cc: Lieben, Ivan; Armann, Steve
Subject: PCBs: Revised PCB Cleanup Completion Report and Covenant - Aspire School - 66th Avenue, Oakland, CA

Dear Mr. Ron Goloubow and Ms. Angela Andrews:

As of June 2013 we have not received the revised PCB cleanup completion report for the subject Aspire School despite our repeated requests for those documents during the last two years. Conditions of approval in EPA's approval of the PCB cleanup work requires that such a report be submitted in addition to a land use covenant, cap inspection, maintenance, and repair plan for review and approval of the language prior to recordation of the covenant. We have reviewed all the draft documents and have provided Mr. Goloubow with comments on such documents. Those comments were also discussed with Mr. Goloubow through conference calls.

In order to determine the PCB cleanup conducted at the Aspire School property in Oakland (66th Avenue) was completed consistent with all conditions in EPA's PCB cleanup approval for the Aspire property, the required PCB cleanup completion report, cap inspection, repair, and maintenance plan, and land use covenant must be submitted for EPA approval. The Alameda County Department of Health must also be included in the review of those documents. Lacking the required documentation, EPA cannot make such a determination. In addition, cap requirements include routine inspections of the cap which in this case consists of all paved areas at the school. Please provide copies of cap inspection reports conducted since completion of the cap.

We are requesting the required documents be submitted not later than October 15, 2013. In replying to this message, we would greatly appreciate you providing an appropriate contact for College for Certain as well as the contact information for the legal counsel with whom we could discuss the above matters.

Thank you for your courtesies.

Sincerely,

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
santos.carmen@epa.gov

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Trestler, Lauren

From: Santos, Carmen <Santos.Carmen@epa.gov>
Sent: Wednesday, September 18, 2013 12:05 PM
To: Goloubow, Ron; Angela Andrews
Cc: Lieben, Ivan; Armann, Steve
Subject: RE: PCBs: Revised PCB Cleanup Completion Report and Covenant - Aspire School - 66th Avenue, Oakland, CA

Hello Ron:

Thank you for writing regarding the Aspire cleanup completion report.

We had provided significant comments on previous versions of the Addendum Report and have commented earlier this year on the technical content and lay out of the report. Our preference is that such report not be referred to as an Addendum report but as a cleanup completion report that includes as an attachment the report that was prepared before all the actual final steps of the physical cleanup of the Aspire property was completed. Therefore, our expectations are to receive the documents listed in your message and those documents being responsive to all the comments that have been provided to ARCADIS. Responses to EPA's comments are fine, however, the cleanup completion report needs to be revised and the revisions responsive to those comments.

Please refer to our messages from 2012 and earlier in 2013 regarding technical issues with the cleanup completion report. In addition, the cleanup completion report needs to be consistent with USEPA's requirements for such report established in the conditional approval of the cleanup activities.

The information presented in your message, if the same as in the last version of the report that we reviewed last year and earlier this year, then that information seem to be adequate as long as it is responsive to all the comments that we already provided in the previous versions of the cleanup completion report. The report should also include a table as to how and if Aspire met each of the conditions of approval. Any deviations from those conditions, if any, should also be explained.

Thank you for your courtesies and please call or write if you have any questions concerning this message.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
USEPA Region 9 (WST-5)
Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105
Voice: 415.972.3360
santos.carmen@epa.gov

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From: Goloubow, Ron [mailto:Ron.Goloubow@arcadis-us.com]
Sent: Monday, September 16, 2013 1:21 PM
To: Santos, Carmen; Angela Andrews
Cc: Lieben, Ivan; Armann, Steve
Subject: RE: PCBs: Revised PCB Cleanup Completion Report and Covenant - Aspire School - 66th Avenue, Oakland, CA

Team - ARCADIS is in to process of revising the documents for the Aspire School Site in Oakland and I want to make sure we are in agreement as to what is going to be provided to the EPA on or before October 15, 2013. Here is my understanding as to what will be provided for EP's review.:

Revised DRAFT Addendum to the PCB Cleanup Completion Report

This document will include responses to the comments provided by EPA in March 2013.

As a reminder this report provides the following

- Summary of additional remedial actions conducted following the submittal of the Implementation Report (dated August 12, 2010)
- A summary of the PCB-affected soil that remains at the Site
- Summary of mitigation measures for the PCB-affected soil that remains at the Site;
- Soil sample laboratory analytical data;
- Revised health risk screening calculations;
- Fill material source information and laboratory analytical data
- Waste disposal information and
- Revised figures showing:
  - Details regarding the surface cap, the landscaped areas, and the redevelop plan);
  - Survey coordinates for the location of soils beneath the cap containing PCBs at concentrations above the cleanup level of 0.130 milligrams per kilogram and
  - Areas where cleanup levels were achieved, where the cleanup levels were not achieved, and where soils contaminated with PCBs above the cleanup level were consolidated beneath the cap at depths ranging from approximately 1 to 4 feet below the current ground surface.

The addendum, along with the Implementation Report, will provide a comprehensive summary of the SICP.

Revised Draft Operation and Maintenance Plan for Cap Mitigation Measures

This document will include the schedule for cap inspection, cap maintenance, and cap repair and will include responses to the comments provided by EPA in March 2013.

Draft Land Use Covenant

This document is being prepared using the example document provided by EPA in January 2013.

Cap Inspection Report
The cap inspection report from September 2013

Please let me know if these are the documents that EPA is expecting.

Thanks Ron.

Ron Goloubow | Principal Geologist | ron.goloubow@arcadis-us.com
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Connect with us! www.arcadis-us.com | LinkedIn | Twitter | Facebook
ARCADIS, Imagine the result

From: Santos, Carmen [mailto:Santos.Carmen@epa.gov]
Sent: Friday, August 30, 2013 1:00 PM
To: Goloubow, Ron; Angela Andrews
Cc: Lieben, Ivan; Armann, Steve
Subject: PCBs: Revised PCB Cleanup Completion Report and Covenant - Aspire School - 66th Avenue, Oakland, CA

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Sincerely,

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Before printing this message and/or attachments, think if it is necessary. Think Green.

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